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Economic Report of the President

Transmitted to the Congress
February 1991

TOGETHER WITH
THE ANNUAL REPORT
OF THE
COUNCIL OF ECONOMIC ADVISERS

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ECONOMIC REPORT
OF THE PRESIDENT

ECONOMIC REPORT OF THE PRESIDENT

To the Speaker of the House of Representatives and the President of the Senate:

Just over 8 years ago the longest peacetime economic expansion in U.S. history began. By the start of the 1990s the unemployment rate had fallen to levels not seen since the early 1970s, and inflation remained relatively low and remarkably stable when compared with the 1970s. More than 20 million new jobs were created by our dynamic and diverse market economy—the largest and the most productive in the world. Reflecting both the evolving needs and wants of the American people and the rapid advance of technology, some industries and regions experienced much more robust job growth than others. And, as is normal during economic expansions, the rate of growth of the Nation's output varied from year to year.

The events of 1990 were a reminder that even a healthy economy can suffer shocks and short-term setbacks. In early August, Iraq invaded and occupied its small, defenseless neighbor Kuwait and threatened Saudi Arabia. Oil prices rose substantially on the world market, and business and consumer confidence plummeted. These shocks hit an economy that was already growing slowly for several reasons, including worldwide increases in interest rates, tightened credit conditions, and the lingering effects of a successful attempt begun in 1988 by the Federal Reserve to prevent an acceleration of inflation. U.S. output turned down in the fourth quarter of 1990, and it became clear that the economy had entered a recession. I know that in some regions of our country, people are in genuine economic distress.

This temporary interruption in America's economic growth does not signal a decline in the basic long-term vitality of the U.S. economy. Indeed, there were important economic achievements in 1990. Even though many analysts had earlier forecast increased inflation, the underlying rate of inflation was contained and showed clear signs of declining by the end of the year. Low inflation is essential to lower interest rates and strong economic growth. The U.S. trade deficit declined for the third year in a row, and U.S. firms remained competitive in world markets. Exports of American products reached an all-time high in 1990 and exceeded those of any other nation. Productivity in U.S. manufacturing continued to grow impressively. Some regions and industries experienced relatively strong job growth.

My Administration's economic policies are designed both to mitigate the current downturn and to provide for a solid recovery and the highest possible rate of sustainable economic growth. Because these policies are credible and systematic, they reduce uncertainty and pave the way to higher growth with sustained job-creating expansions. With these policies in place, the current recession is expected to be mild and brief by historical standards.

Economic growth is projected to recover by the middle of this year. Inflation and interest rates are expected to decline. With the adoption of my pro-growth initiatives, the recovery and ensuing expansion are projected to be strong and sustained, and to be accompanied by continued progress toward lower inflation.

As the Nation proceeds into the 1990s, it is important to remember the simple secret of America's economic success in the 1980s: a government policy that allowed the private sector to serve as the engine of economic growth. We must also remember that economic growth is the fundamental determinant of the long-run success of any nation, the basic source of rising living standards, and the key to meeting the needs and desires of the American people.

The process of growth necessarily involves change. Advances in technology, shifts in world market conditions, and changes in tastes and demographics have created major new industries and dramatically altered the fortunes of existing industries. The lesson of history is clear. Attempts to protect special interests by blocking the economy's natural, market-driven evolution—through regulation, subsidy, or protection from competition—reduce the economy's flexibility and impair its ability to grow and to create jobs. Growth and prosperity are enhanced by strengthening and extending the scope of market forces, not by substituting government dictates for the free choices of workers, consumers, and businesses.

TOWARD RENEWED GROWTH

The budget law enacted last fall gives fiscal policy a strong and credible medium-term framework. It increases the ability of the fiscal system to dampen the impact of the current recession, while providing for strong controls to reduce Federal spending as a percentage of our gross national product. A major reason that the budget deficit is expected to increase this year—before declining steadily thereafter—is the increase in payments to those adversely affected by the current downturn and the reduction in tax receipts as incomes grow more slowly. These automatic responses to the recession will help cushion its effects.

I am committed to maintaining a tax system that will sustain strong economic growth. My proposal to reduce the tax rate on capital gains would give a needed boost to the economy and set it on a strong course of economic growth and job creation for years to come. A lower capital gains tax rate would encourage entrepreneurial activity, which plays a critical role in creating new jobs, new products, and new methods of production. It would reduce the bias in favor of debt financing and thereby decrease the financial risks borne by U.S. corporations and their workers and shareholders.

The Federal Reserve's control of inflation throughout the recent long expansion has given it the credibility necessary to mitigate the current downturn significantly without triggering an increase in inflationary expectations. Federal Reserve action in recent months will also help to alleviate tight credit market conditions that have hampered the economy. It is important that the Federal Reserve sustain money and credit growth necessary for the maintenance of sustained economic growth, especially during an economic downturn. And, while unwarranted risks should be avoided, I believe that sound banks should be making more sound loans.

Comprehensive banking reform will help to alleviate tight credit conditions by reducing unnecessary restrictions on the banking sector. Healthier depository institutions are essential for a sound financial system. Lifting restrictions on interstate banking activities and on the ability of banks to combine with commercial and other financial firms will increase banks' competitiveness. These changes will enhance banks' ability to attract capital and reduce the risk of a contraction in lending.

Some have argued that the government should react to the recent oil price shock by reregulating energy markets. They would do well to remember the lessons of the 1970s, when regulation worsened the impacts of two oil shocks and forced Americans to waste many hours in long and unnecessary lines at gas stations. Long-term uncertainties about energy prices make it vital that U.S. energy policy be based, in both the short run and the long run, on the flexibility and efficiency that only well-functioning markets can provide.

My Administration's National Energy Strategy calls for removing unnecessary barriers to market forces so that ample supplies of reasonably priced energy can continue to foster economic growth. The Strategy also outlines initiatives to enhance the energy security of the United States and its friends and allies, to encourage cost-effective conservation and efficiency measures, to increase the use of alternative fuels, and to continue to mitigate the environmental consequences of energy use.

SUPPORTING LONG-RUN GROWTH

The Federal Government cannot mandate or effectively direct economic growth, but it can and should create conditions that encourage market-driven growth. That requires reducing barriers to saving, investing, working, and innovating. Encouraging growth also requires sustaining and expanding the role of market forces and, thereby, enhancing the economy's flexibility. Attempts to second-guess the market and to direct government support to particular firms, industries, or technologies in the name of promoting growth are inevitably counterproductive.

The multiyear Federal deficit reduction package adopted last year, the largest and most comprehensive such package in U.S. history, will reduce the Federal budget deficit by nearly a half-trillion dollars over the next 5 years relative to baseline projections. This substantial reduction in government borrowing will raise the national saving rate and increase the pool of funds available to finance job-creating private investment in new productive capacity and new technology.

My Administration remains firmly committed to taking additional steps to lower the cost of capital and to encourage entrepreneurship, saving, investment, and innovation. I have again asked the Congress to reduce the tax rate on long-term capital gains and to make the research and experimentation tax credit permanent. To encourage private saving, my budget again includes Family Savings Accounts and penalty-free withdrawals from Individual Retirement Accounts for first-time homebuyers. My Administration will seek increased Federal support for research that has broad national benefits, and we will make the results of government-supported research more accessible to the private sector so that they can be brought more quickly to market.

Strong economic growth will continue to require a sound national transportation infrastructure. My Administration's proposals for restructuring highway programs, centered around a new National Highway System program, would make a substantial contribution to meeting those demands.

Economic growth requires skilled and adaptable workers as well as modern capital and new technology. Excellence in education is the key to increasing the quality of the U.S. labor force. My Administration is strongly committed to making the U.S. educational system second to none, so that U.S. workers can continue to compete effectively with their peers in other nations. To meet this goal, the performance of U.S. elementary and secondary education must be dramatically improved. More money will not ensure excellence; America is already a world leader in spending on education. Fundamental reform is necessary.

Government policies should be designed to put power in the hands of individuals and families—to give them the tools and incentives to improve their own lives. Thus students and their families must be given greater freedom to choose among competing schools, and talented and skilled individuals must be freed from unnecessary obstacles to entering the teaching profession. My Administration will seek enactment of a new Educational Excellence Act that would support choice in education, alternative certification for teachers and principals, rewards for outstanding teachers and for schools that improve their students' achievements, and innovative approaches to mathematics and science education.

The Immigration Act of 1990, the first major reform of legal immigration in a quarter-century, will substantially increase the overall level of immigration, particularly of skilled workers. These new workers will contribute to U.S. economic growth, as well as to the Nation's social and cultural vitality.

The Americans with Disabilities Act is the most significant extension of civil rights legislation in two decades. It will enable more of our citizens with disabilities to enter the economic mainstream and thus to better their own lives while contributing to the Nation's economic strength.

Last year important legislation passed that will give power and opportunity to individuals. The expansion of the Earned Income Tax Credit, the new health insurance credit, and the other child care provisions in the 1990s budget legislation will put dollars for child care directly in the hands of parents, instead of bureaucracies. The Homeownership and Opportunity for People Everywhere (HOPE) initiative in the National Affordable Housing Act will expand homeownership and give more families a stake in their communities. My Administration strongly supported the expansion of medicaid to provide health insurance to more pregnant women and children in low-income families.

But there is more to be done. My Administration will continue to press for the establishment of enterprise zones to encourage entrepreneurship, investment, and job creation in distressed communities. We will propose initiatives focused on infant mortality, preventive measures, and nutrition to improve the health of those least able to provide for their own needs.

FLEXIBILITY AND REGULATION

The remarkable flexibility of the U.S. economy, which stems from its reliance on free markets, is a major national asset. Flexibility enables the economy to cushion the effects of adverse developments, such as oil price shocks, and to take full advantage of innovations and other new opportunities. Indeed, the responsiveness of the economy to new opportunities is an important spur to innovation and a source of economic dynamism.

Government regulation generally serves to reduce economic flexibility and thus should have a very limited role. Where regulation is necessary, regulatory programs should pass strict cost-benefit tests and should seek to harness the power of market forces to serve the public interest, not to distort or diminish those forces.

The lesson of the savings and loan crisis, to which my Administration responded swiftly, is not that competition and innovation are incompatible with safety and soundness in the financial sector. Rather, this experience shows that poorly designed regulation, inadequate supervision, and limits on risk-reducing diversification can combine to produce behavior that undermines creditors' confidence and imposes unnecessary burdens on taxpayers.

We can and must ensure the safety and soundness of our banking system and continue to provide full protection for insured deposits while allowing competition to improve efficiency and encourage innovation. My Administration's proposals for comprehensive reform of the regulatory system governing banks will achieve these goals. In addition, these reforms will enhance the ability of U.S. banks to compete in the global markets for financial services.

Last year's farm legislation embodied important steps toward a market-oriented agricultural policy and away from government domination of this vital and progressive sector. Farmers have been given additional flexibility in planting decisions, in a way that will both sustain farmers' incomes and save taxpayers' money.

Market-based initiatives can and should play a key role in environmental policy as well. In 1989 my Administration proposed comprehensive legislation to combat air pollution. This proposal broke a logjam that had blocked congressional action for more than a decade, and a landmark clean air bill was enacted last year—the most significant air pollution legislation in the Nation's history. The centerpiece of this bill is an innovative, market-based program for controlling—at the least possible cost to the economy—the emissions that produce acid rain. All provisions of this legislation will be implemented so as to minimize unnecessary burdens on American workers and firms.

Economic growth and environmental protection are compatible, but only if environmental goals reflect careful cost-benefit analysis and if environmental regulation provides maximum flexibility to meet those goals at least cost. My Administration will continue to be guided by the responsibilities of global stewardship; we will seek both to protect the environment and to maintain economic growth to give all the world's children the chance to lead better lives than their parents.

LEADERSHIP IN THE GLOBAL ECONOMY

Throughout the postwar period, the United States has led the world toward a system of free trade and open markets. The benefits of global economic integration and expanded international trade have been enormous, at home and abroad. U.S. firms gain from access to global markets; U.S. workers benefit from foreign investment in America; and U.S. consumers can buy goods and services from around the world. Competition and innovation have been stimulated, and businesses have increased their efficiency by locating operations around the globe. The phenomenal prosperity and vitality of market-oriented economies—and the bankruptcy of the socialist model—point the way to future progress and growth.

My Administration will continue to push aggressively for open markets in all nations, including our own, and will continue to oppose protectionism. Protectionist trade barriers impose burdens on the many to serve the interests of the few and can only reduce the Nation's competitiveness. Government attempts to overrule the decisions of the international marketplace and to manage trade or investment flows inevitably reduce economic flexibility and lower living standards.

My Administration's top trade policy priority continues to be the successful completion of the Uruguay Round negotiations of the General Agreement on Tariffs and Trade (GATT). Success in the Uruguay Round would open agricultural markets, lower or eliminate tariffs on many products, strengthen the GATT system, and extend it to cover important new areas—such as services, investment, and intellectual property—critical to U.S. economic vitality. These improvements would significantly increase the ability of the global economy to raise living standards in the United States and around the world. Failure, on the other hand, would increase trade frictions and could lead to a destructive new round of protectionism.

In addition, my Administration has moved to pave the way toward a hemispheric zone of free trade. We have announced our intention to begin negotiations on a free-trade agreement with Mexico. My Enterprise for the Americas Initiative promises to fuel growth and prosperity throughout this hemisphere by removing barriers to trade and investment. This initiative also aims to provide official debt reduction to countries engaged in significant economic reforms and thereby to build on my Administration's ongoing support for commercial debt reduction.

America remains a beacon of hope to peoples around the world. Our Nation continues to demonstrate by shining example that political democracy and free markets reinforce each other and together lead to liberty and prosperity. Nations in this hemisphere and the emerging democracies of Eastern Europe are eagerly moving to follow America's example. The challenges these nations face as they fundamentally restructure their economies are enormous. My Administration will continue its strong support and assistance for their vital and historic efforts.

LOOKING AHEAD

In my *Economic Report* last year I stated that I looked forward to the 1990s with hope and optimism. Despite the economic events of 1990, we have reason for both hope and optimism in full measure as the Nation approaches the next American century.

Following sound economic policy principles, my Administration seeks to achieve the maximum possible rate of sustainable economic growth. We must continue to adhere to those principles if we are to soften the impacts of the current recession and to strengthen the foundation for strong growth in the years to come. Economic growth remains the key to raising living standards for all Americans, to expanding job opportunities, and to maintaining America's global economic leadership.

Bush

THE WHITE HOUSE
FEBRUARY 12, 1991

THE ANNUAL REPORT
OF THE
COUNCIL OF ECONOMIC ADVISERS

LETTER OF TRANSMITTAL

COUNCIL OF ECONOMIC ADVISERS,
Washington, D.C., February 4, 1991

MR. PRESIDENT:

The Council of Economic Advisers herewith submits its 1991 Annual Report in accordance with the provisions of the Employment Act of 1946 as amended by the Full Employment and Balanced Growth Act of 1978.

Sincerely,

Michael J. Boskin

Michael J. Boskin
Chairman

Richard L

Richard L. Schmalensee
Member

John B Taylor

John B. Taylor
Member

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CHAPTER 1

Foundations for Economic Growth

THE LONGEST PEACETIME EXPANSION in the Nation's history began in 1982. Throughout the expansion, inflation remained relatively low and stable compared with the 1970s. By the end of the 1980s, the unemployment rate had fallen to levels not experienced since the early 1970s. As is normal in times of robust economic progress, growth varied from year to year during the expansion. After a rapid recovery from late 1982 through 1985, growth slowed temporarily in 1986, gained considerable strength in 1987 and 1988, and turned sluggish in 1989 and 1990.

The first year of the 1990s served as a reminder that even a healthy economy faces the risk of short-term setbacks from external shocks and other disturbances. In August Iraq outraged the world by invading and occupying Kuwait. In the weeks that followed, oil prices rose sharply on the world market, and uncertainty about the timing of the resolution of the Persian Gulf crisis caused business and consumer confidence to plummet. These developments were a substantial shock to an economy that had already slowed for several reasons, including worldwide increases in interest rates, tightened credit conditions, and the lingering effects of a monetary policy that had begun to tighten in 1988 in a successful attempt to prevent an increase in inflation. In the fourth quarter of 1990 U.S. output, as measured by real (inflation-adjusted) gross national product (GNP), turned down, and it became clear that the economy had entered a recession.

The Administration's economic policies are designed both to mitigate the current downturn and to strengthen the foundations for a solid recovery and a return to sustained economic growth. The dominant factor in the success and failure of nations, long-term growth is the fundamental source of improvements in living standards. By responding systematically and prudently to ongoing developments, the Administration's economic policies reduce uncertainty and maintain the credibility so important to long-run growth and to the ability to respond to shocks that may occur in the future.

The global wave of market-oriented reform—most visible in Eastern Europe—shows that the world has learned from America that reliance on free markets is the key to sustainable long-term growth and prosperity. In the U.S. economy, free markets fuel and direct the process of economic growth. Market forces in the financial sector channel savings into growth-enhancing investment opportunities; these forces both reward and encourage entrepreneurship—the economy's sparkplug.

The flexibility of the market-based U.S. economy both increases its resilience in the face of disturbances and enhances its ability to make the most of new opportunities. That, in turn increases the incentives for productive innovation. As the global economy becomes more integrated and the pace of technological and economic change quickens, flexibility grows ever more important.

The proper role of government is not to supplant or suppress the private market forces that drive the process of economic growth, but to create an environment within which rapid growth can occur. Because regulation inevitably reduces flexibility, its role in the economy must be limited. Barriers to saving, investing, working, and innovating must be reduced.

RECENT DEVELOPMENTS AND PROSPECTS

The downturn in the U.S. economy in the latter part of 1990 does not signal any decline in its long-run underlying health or basic vitality. As stated in last year's *Report*, economic expansions end because of external shocks, imbalances in demand, or policy mistakes. The oil price shock of 1990 makes clear that the economy is episodically buffeted by external shocks. If sound fiscal, monetary, regulatory, and trade policies are maintained, however, such shocks will have smaller effects on the economy, downturns will be shallower and shorter, and expansions will be longer. In fact, with such policies now in place, the current downturn is expected to be shorter and milder than the average post-World War II recession.

DEVELOPMENTS IN 1990

The oil price shock, the sudden drop in consumer and business confidence, and the uncertainty about when the Persian Gulf crisis would end were undoubtedly the key factors in the downturn in late 1990. Oil prices more than doubled between July and October, before declining toward the end of the year and again in early 1991 after the outbreak of hostilities in the Gulf. Consumer and business confidence may have been reduced by the superficial similarity of this oil price shock to those of the 1970s, when unemployment and inflation soared.

The oil price shock hit an economy that was already growing slowly. A worldwide rise in long-term interest rates early in the year—partly due to anticipated increases in the demand for capital in Eastern Europe and to concerns about accelerating inflation—

put upward pressure on borrowing rates in the United States and slowed the growth of consumer and business spending. This rise occurred when long-term interest rates were already high, in part because of large Federal budget deficits and the prospect that they might continue indefinitely.

The Federal Reserve had initiated a more restrictive monetary policy in the spring of 1988 to ward off an increase in the underlying inflation rate. The lagged effects of this policy also slowed the economy in 1989 and 1990, as higher interest rates discouraged spending. This tightening successfully contained inflationary pressures, and left monetary policy with much more latitude—compared with the inflationary policies of the 1970s—to ameliorate the adverse effects of the oil price shock.

Tighter credit markets reduced the availability of loans to some creditworthy borrowers, and this also contributed to the slowdown. Banks and other financial institutions tightened lending standards for a number of reasons: A slowing economy increased the risks of lending to businesses. The value of collateral on residential and commercial real estate loans fell with declining real estate values. Overly zealous bank examiners discouraged some banks from making new loans. And the need to increase the ratio of capital to loan assets to meet minimum capital requirements forced some banks to curtail loan growth. Stricter lending standards for commercial and residential loans slowed business investment and housing construction.

There were several favorable economic developments in 1990. The underlying inflation rate was contained. After a temporary increase in the first quarter, the growth rate of the GNP fixed-weighted price index, the broadest measure of economy-wide inflation, declined later in the year, as did the rate of change in the employment cost index—a measure of wage pressures in private labor markets. Compared with 1988, when inflationary pressures were becoming evident and the Federal Reserve began to take actions to contain them, the employment cost measure of wage inflation grew more slowly during 1990, rather than more rapidly as many had feared.

The continued decline in the trade deficit was also good news. Including trade in both goods and services, the trade deficit has declined from $144 billion in 1987 to $77 billion in 1990. U.S. firms remained competitive in world markets, exports reached a new record, and the United States remained the world's leading exporter. Labor productivity in manufacturing continued its recent strong growth. And, although growth fell for the overall economy, some regions experienced relatively strong employment gains.

THE OUTLOOK

The Administration projects that real economic growth will be 0.9 percent over the four quarters of 1991, with the downturn continuing through the first quarter and a recovery beginning near the middle of the year. Inflation is expected to remain under control, declining substantially from the temporarily high levels reached as a result of the oil price shock. Continued progress in gradually lowering the underlying rate of inflation is also expected. Interest rates are projected to be lower on average in 1991 than in 1990, reflecting slower growth in credit demand during the downturn, as well as lower inflation rates.

The current downturn is expected to be short and shallow for several reasons. Most firms have kept inventories low relative to sales, reducing the need for a sharp cut in production to work off excess inventories. Such inventory corrections accounted for much of the decline in output in earlier postwar recessions. Moreover, net exports are projected to improve, both because the Nation's major trading partners are expected on average to experience stronger growth than the United States, and because the decline in the value of the dollar since 1989 has lowered the price of U.S exports on world markets. Oil prices remain a source of uncertainty in the outlook, but they have declined substantially since their peak in October, particularly since the start of Operation Desert Storm. Finally, both fiscal and monetary policies are well positioned to mitigate the downturn. There is a downside risk that the tightness in credit markets evident in 1990 will continue into 1991, a consideration that poses special challenges for monetary policy.

Assuming adoption of the Administration's growth initiatives—including a lower tax rate on long-term capital gains, tax incentives to reduce barriers to household saving, reforms to strengthen the financial sector, and increased investment in children, education, infrastructure, space, and high technology, all within the context of lower structural budget deficits—the long-term outlook is excellent. Growth is expected to strengthen in 1992, with the economy in a relatively high-growth recovery through 1993 before returning to a solid, sustainable expansion. With sound economic policies in place, there is no fundamental obstacle to an expansion in the 1990s at least as long and strong as the record expansion of the 1980s.

BUILDING ON STRENGTH

In designing policies to cushion the current downturn and enhance long-run U.S. economic performance, it is critical to remember that the Nation already has the largest and most productive economy in the world. The historic changes that began in Eastern

Europe in 1989 represent, in part, the triumph of the basic principles upon which the American economy has been built. The flexibility and adaptability of free markets have given America both the highest living standard of any major economy and the means to ensure the Nation's continued prosperity.

With less than 5 percent of the world's population, the United States produces about 25 percent of the world's total output (measured by GNP). The U.S. economy is more than twice as large as the next largest economy, that of Japan. The average standard of living of Americans—as measured by GNP per capita—is above that in other major industrialized countries. U.S. productivity is also higher than in those other nations; as measured by GNP per worker in 1989, productivity in West Germany and Japan was only about three-fourths of that in the United States.

Economic growth in a flexible market economy involves change as well as expansion; the waxing and waning of individual industries and sectors is natural and healthy. In the United States, as in most other industrialized nations, changes in demand, productivity, and demographics have produced a long-term shift in employment from goods-producing to service-producing sectors. Dramatic advances in productivity have kept manufacturing's share of total real output roughly constant throughout the postwar period, even though its share of total employment has declined.

America is unsurpassed in basic research and has by far the world's largest share of contributions to scientific literature. U.S. firms have a distinct edge in many knowledge-intensive products, and the United States continues to produce larger volumes of many high-technology products than any other nation.

Recent increases in foreign investment in the United States reflect both the size and health of the American economy and the trend toward greater global economic integration. Those who are concerned about this investment neglect the lessons of history. Fears of foreign investment were widespread in Europe in the 1950s and 1960s, when the issue was *American* investment overseas. However, as Europeans have since learned, foreign investment that helps to build plants and equip workers can increase productivity and raise standards of living. Foreign investment in the United States is a sign of America's strength and a vote of confidence in its economic future.

POLICIES FOR RENEWED GROWTH

Fiscal policy—the Federal Government's taxation, expenditure, and borrowing policies—and monetary policy—decisions directly affecting the money supply and interest rates—can have powerful effects on the economy in both the short run and the long run. The government's policy toward the financial sector—the regulation and supervision of banks and other financial institutions—significantly affects both the short-run stability of the economy and its long-run ability to channel savings efficiently into productive investments.

When unemployment increases or inflation seems to be accelerating, fiscal and monetary policies can alleviate the economy's immediate problems. But a sequence of short-sighted discretionary reactions can produce poorer performance on average than adherence to well-designed credible, systematic policies. Businesses and households are forward-looking, and expectations about future economic conditions and macroeconomic policies affect their decisions. Frequent discretionary changes in policy impede long-term planning and thus undermine the economy's performance.

Signals about the goals and approach that will guide monetary and fiscal decisions must be clear and credible. Credibility provides the latitude to respond to short-run developments without altering the public's expectations that policy will continue to be stable and systematic. But credibility, like respect, must be earned; monetary and fiscal actions must be consistent with stated long-run goals and policies.

Accurate and timely economic data reduce uncertainty and enhance the soundness both of private sector decisionmaking and of macroeconomic policy analysis and implementation. The Administration is thus committed to continuing improvements to the Nation's statistical infrastructure.

FISCAL POLICY

During an economic downturn, government expenditures—such as unemployment compensation—increase, and tax receipts fall relative to what they otherwise would be. Although they temporarily increase the budget deficit, these changes in taxes and expenditures work as "automatic stabilizers" to reduce declines in income and spending and thus to hasten recovery. They are systematic and fast-working, unlike discretionary changes in fiscal policy, which require legislative actions, may take too long to enact, and are difficult to reverse.

To sustain robust economic growth, the United States must maintain a high rate of investment in new capital and new technology. That, in turn, requires an adequate flow of national saving. The substantial Federal budget deficits of recent years have decreased the national saving rate. Sound, growth-oriented fiscal policy thus requires that the Federal budget deficit be reduced.

The Omnibus Budget Reconciliation Act of 1990 contains the largest and most comprehensive deficit reduction package in U.S. history. It is designed to reduce the Federal deficit by a total of nearly one-half trillion dollars over the next 5 years, relative to what it would otherwise be, with the reduction in the deficit phased so as to minimize adverse short-term effects on the economy. The resulting higher level of national saving will fuel economic growth and contribute to U.S. prosperity for years to come. In addition, the new budget law achieves two key fiscal policy objectives.

First, it contains credible enforcement mechanisms, using caps on spending and pay-as-you-go rules, to prevent new legislation from increasing the budget deficit. The caps put into effect the concept of a "flexible freeze": Within each discretionary spending category, any spending increases must be offset by spending cuts to stay within the cap. Across-the-board spending cuts are required whenever the caps or rules are violated.

Second, new systematic procedures enhance the ability of the automatic stabilizers to cushion downturns in the short run. Under the new law, deficit targets are adjusted for changes in economic conditions, as reflected in the Administration's forecast. That permits the automatic stabilizers to work more effectively. In contrast, the previous law had no procedure for adjusting the deficit targets without suspending the entire enforcement mechanism.

Another important element of the Administration's fiscal policy is a commitment to a tax system with low marginal tax rates and the lowest possible barriers to economic growth. The Administration has proposed a reduction in the tax rate on long-term capital gains. A capital gains tax cut would affect real estate and other asset values favorably, thereby alleviating capital and balance sheet problems in both financial and nonfinancial corporations. It would reduce the existing bias against financing through equity rather than through debt. It would also increase long-term economic growth by stimulating saving, lowering the cost of capital, and encouraging investment. And it would encourage entrepreneurship so essential for the creation of new jobs and the commercialization of new ideas.

To further stimulate private saving, the Administration has proposed Family Savings Accounts. Contributions to these accounts would not be tax-deductible, but withdrawals of earnings and contributions after 7 years would not be taxed. The Administration also proposes to ease requirements for withdrawals from Individual Retirement Accounts for people buying a home for the first time. That would make these accounts more attractive to young people and thereby increase private saving.

MONETARY AND FINANCIAL SECTOR POLICY

Monetary policy also has an important role to play in mitigating the current downturn and providing for strong growth and a gradual reduction in inflation. Because of the past and potential future changes in the structure of the economy, monetary policymakers must necessarily consider a number of indicators—including output, general price indexes, interest rates, exchange rates, futures prices, money, and credit—in judging the direction of the economy and the impact of monetary policy. But, barring changes in the relationship between money and income, an important characteristic of a credible and systematic monetary policy is a commitment to sustain the rate of growth of money and credit during a downturn. Such a commitment would automatically bring about a reduction in interest rates and soften the downturn. It is important to recognize, however, that a decline in interest rates during a downturn may not be a sign of monetary easing, especially if the growth of money and credit has slowed.

It is vital to maintain a credible commitment to long-run goals and policies when responding to temporary disturbances. The relatively low and stable inflation rates that prevailed before the 1990 oil price shock permit the Federal Reserve to cushion the downturn without leading businesses and households to expect higher future rates of inflation.

Tight credit conditions may create special challenges for monetary policy in the year ahead. The reduction by the Federal Reserve in banks' reserve requirements implemented toward the end of 1990 was aimed at alleviating these conditions and will help to moderate the downturn. In encouraging sound banking practices, the Federal Reserve and other bank regulators should not pursue overly stringent regulations that unnecessarily restrict creditworthy borrowers. Historical experience and research show that sustained money growth can go a long way toward offsetting other sources of credit market tightness.

The Administration's proposal for comprehensive banking reform will reduce unnecessary and antiquated restrictions on the banking industry and thereby help to ease tight credit conditions. Healthier banks are essential if the financial system is to provide adequate supplies of credit during economic downturns as well as in periods of expansion. Lifting restrictions on interstate banking activities and on the ability of banks to combine with commercial and other financial firms will enhance banks' ability to attract capital and thus reduce the risk of a contraction in lending.

POLICIES TO SUPPORT GROWTH

Efforts to protect special interests by resisting the economy's natural evolution are often futile, generally sap the economy's vitality, and always reduce its flexibility and ability to benefit from change. Instead, growth must be supported by policies that increase the role of market forces, while ensuring that opportunities are enhanced for all Americans and that the Nation's environment is protected.

ENCOURAGING INVESTMENT AND IMPROVING EDUCATION

Continued growth in productivity and living standards requires investment in new buildings and equipment, advances in technology, and improvements in the skills of U.S. workers. All these must be encouraged if America is to leave its children a legacy of global economic leadership.

Investment in plant, equipment, and commercial technologies is the task of the private sector. Because market forces guide investment funds to their most productive uses, the government can generally only slow economic growth by second-guessing private investment decisions. Government's primary task is to create conditions under which high levels of productive investment, guided by market forces, can fuel rapid growth. The multiyear deficit reduction program enacted in 1990 is an important step in this direction. Reducing the tax rate on long-term capital gains and enacting the Administration's proposals to increase private saving would also significantly reduce barriers to robust long-term economic growth.

In addition, of course, governments at all levels must recognize their shared responsibility to provide an efficient U.S. transportation infrastructure, which is necessary for sustained economic growth. Legislation passed in 1990 will make it easier for airports to finance needed capacity expansions. The Administration will seek both increases in Federal funding for highways and a restructuring of highway programs that will give the States greater flexibility, while ensuring that the 150,000 miles of roads in the National Highway System will be maintained, rehabilitated, and expanded.

The Federal Government has an important role to play in the process of technological change. Some research projects offer the potential of large benefits to the economy as a whole but do not offer much prospect of profit to any private firm that might undertake them. The knowledge generated by these projects would be valuable, but no firm could prevent others from capturing most of that value. Such "spillovers" are important in the case of basic research, the results of which cannot generally be directly incorporated into a marketable product or process. The Administration has proposed substantial increases in Federal support for basic research, and the President has announced his intention to double the budget of the National Science Foundation.

Some areas of applied research promise advances in generic, precompetitive technologies that would also have large spillovers. The Administration will seek increased support for such research and will make the results of government-supported research more readily available to the private sector for speedier commercialization. Adoption of the Administration's proposed reform of the antitrust law governing joint ventures would increase the ability of the private sector to take advantage of research opportunities with industry-specific benefits. Finally, the Administration will again seek to make the research and experimentation tax credit permanent to enhance incentives for private-sector investment in new technology.

Education is the key to increasing the skills of the U.S. labor force. If America's children continue to learn less in school than their counterparts abroad, America's workers will not long continue to earn more. The United States already spends more per pupil in elementary and secondary education than all its major competitors, but it does not receive an adequate educational return on this investment.

The Administration will continue its strong support of the fundamental reform necessary to achieve excellence in U.S. elementary and secondary education. The key to successful reform is to harness the power of market forces: Schools should be able to compete for students. Parents and students must be afforded more choice among schools, and unnecessary barriers to entry into the teaching profession must be swept away.

The Administration will introduce a new Educational Excellence Act, which will stimulate fundamental reform and restructure the Nation's education system by promoting educational choice and alternative certification for teachers and principals. And, to help ensure that all students enter school ready to learn, the Administration has significantly expanded the Head Start program. The President will continue his close work with the Nation's Governors to advance the vital cause of educational excellence.

The Immigration Act of 1990, the first major reform of legal immigration in 25 years, will enhance the quality of the American labor force. This legislation will significantly increase the level of skill-based immigration and reaffirm the Administration's commitment to family reunification as a central tenet of U.S. immigration policy.

STRENGTHENING MARKET FORCES

Free, competitive markets for goods and resources maintain high U.S. living standards and both guide and stimulate the process of economic growth. The long-run performance of the economy is thus enhanced by policies that extend the scope of market forces and maintain market flexibility.

The Administration remains committed to an energy policy that relies on the flexibility and power of market forces to ensure that all the Nation's resources are efficiently utilized. In the aftermath of Iraq's invasion of Kuwait, some called for increased regulation of energy markets. But these policies would increase the economic burden of the oil price shock, bring back the gasoline lines of the 1970s, and make the economy less flexible and efficient. They are firmly opposed by the Administration. The Nation's Strategic Petroleum Reserve was tested in October and November, and an internationally coordinated program to make government-controlled stocks available to the marketplace began with the outbreak of hostilities in the Persian Gulf.

The National Energy Strategy, which was under development well before the onset of the Gulf crisis, continues the successful policy of reliance on market forces. It recognizes that in an increasingly integrated global economy, U.S. energy security cannot be separated from that of the Nation's friends, allies, and trading partners; all countries are affected by sharp, unanticipated price changes in world energy markets. It reflects the need to foster economic growth through the availability of ample supplies of reasonably priced energy. Implementation of the National Energy Strategy would enhance energy security by increasing the diversity of energy supplies, removing barriers to competition in energy markets, encouraging economical conservation, and increasing Federal support for energy-related research with potentially significant spillover benefits.

Strong economic growth requires a financial sector that is sound, efficient, and innovative. Banks in the United States still operate under a regulatory system that dates from the 1930s. That system attempts to keep banks healthy and the deposit insurance system sound by limiting competition, but it is simply no longer workable. U.S. banks face increasing competition from other institutions and markets around the world. The long-term vitality of U.S. banks depends on their ability to compete effectively. The Administration's proposal to reform financial sector regulation would make banks financially healthier and better able to compete, while ensuring the soundness of the deposit insurance system.

An important planting flexibility provision of farm legislation enacted in 1990 makes market incentives a more important determinant of farm production decisions. This provision will save about $7 billion in Federal spending over the next 5 years.

GIVING POWER AND OPPORTUNITY TO INDIVIDUALS

Without a healthy, growing economy, poverty in the United States cannot be reduced. But growth alone is not enough. It should be supplemented by policies designed to give power and opportunity to individuals—to give them both the incentive and the means to participate fully in the economy.

In 1990, after a 3-year debate, the Congress passed child care legislation consistent with the President's objectives of limiting governmental interference with parents' decisions, not discriminating against working families who care for their own children, and targeting assistance to those most in need. The 1990 budget act provides an increase of about $18 billion in assistance to low-wage workers with children over the next 5 years by expanding the Earned Income Tax Credit.

The Administration's Homeownership and Opportunity for People Everywhere (HOPE) initiative was also signed into law in 1990. This initiative will enable low-income families to become homeowners and give them a greater stake in their communities. Increased tenant ownership and control of public housing would further help to build the bonds of community in distressed neighborhoods. And the Administration's enterprise zone proposal would encourage entrepreneurship, investment, and job creation in urban and rural pockets of poverty.

The landmark Americans with Disabilities Act is the most important extension of civil rights protection in two decades. It will permit many disabled Americans to participate fully in the Nation's economic mainstream and to contribute to and benefit directly from America's growth and prosperity.

Medicaid coverage was expanded in 1990 to improve prenatal care and child health in low-income families and to reduce infant mortality. The Administration's new infant mortality, preventive care, and nutrition initiatives would make significant contributions to the health of low-income Americans.

LIMITING REGULATION AND MAKING IT WORK

When markets can work well, regulation can only reduce flexibility and slow growth. Even when markets work poorly, the inevitable imperfections of regulation often make its use costly and inefficient. Regulation should be employed only when its benefits clearly exceed its costs. Regulatory targets should be chosen by careful cost-benefit analysis, and the methods of regulation should minimize the costs and disruptions of reaching those targets. Cost-minimization requires that incentives be carefully structured and that firms and workers be allowed maximum flexibility to meet well-designed performance standards. In particular, economic growth and environmental protection can be compatible, but only if environmental regulation does not impose unnecessary costs on the economy.

After the President's leadership had broken a logjam that had long blocked congressional action, the first comprehensive amendments to the Clean Air Act in more than a decade were signed into law in 1990. This legislation incorporated a flexible and innovative market-based system that will secure a substantial and permanent reduction in the sulphur dioxide emissions that cause acid rain. The reduction will be achieved at an estimated cost 20 percent lower than the cost of traditional, less flexible command-and-control regulation. The Administration is committed to implementing all provisions of this legislation so as to minimize unnecessary burdens on American workers and firms.

U.S. LEADERSHIP IN THE GLOBAL ECONOMY

The principle that market forces, not government planners, are the best source of lasting prosperity is as valid in global markets as it is within individual economies. The Administration accordingly remains strongly committed to removing barriers to trade and investment in all nations, to opposing pressures for protectionism and government management of trade, to supporting market-oriented reform around the world, and to pursuing macroeconomic policies conducive to strong noninflationary growth in the United States and the world economy.

INTERNATIONAL TRADE LIBERALIZATION

Since the end of World War II, the United States has led the world toward a system of free trade and open markets. As a consequence of this policy and of natural economic forces, America's economic prospects have become closely linked with those of other countries. Increased global economic integration has expanded markets for U.S. exports, encouraged innovation, and expanded the choices available to American consumers. World trade, which has grown more than 1½ times as fast as world income since the early 1960s, has improved the living standards of all Americans. In recent years exports have made an important contribution to U.S. economic growth.

Policies that target particular industries for protection from international competition, whether by means of tariffs or quotas, or through the newer device of managed trade, impose costs on the economy as a whole. Such policies limit consumer choice, raise domestic prices, reduce competition, impair the flexibility and competitiveness of the U.S. economy, and invite retaliation against U.S. exports. This Administration will continue to resist protectionist pressures and to work to open markets here and abroad.

Sustained strong worldwide growth in the 1990s will depend on continued progress toward a free and open multilateral trading regime. Completing the Uruguay Round of multilateral trade negotiations, under the auspices of the General Agreement on Tariffs and Trade (GATT), remains the top trade priority of the Administration. In the Uruguay Round the United States has sought a significant agreement that reduces or eliminates tariffs in all nations in several broad sectors of manufacturing and that phases out other barriers to trade in textiles and agriculture. A key aim of the negotiations is to strengthen and modernize GATT rules and to extend them to new areas such as services, investment, and intellectual property.

In 1990 the Administration undertook several other market-opening initiatives that will both spur growth in this hemisphere and support the wave of market-oriented reform sweeping Latin America. A U.S.-Mexico free-trade agreement was endorsed by the Presidents of both countries. The Enterprise for the Americas Initiative aims to expand trade through free-trade agreements, to encourage liberalization of investment regimes in order to increase capital formation in the region, and to reduce official debt of countries pursuing strong economic reform programs. Additional measures to reduce trade barriers were also undertaken to help support cooperation on anti-narcotics efforts with Andean countries. As the benefits of these programs to the United States and its trading partners in the hemisphere become apparent, a clear signal of the gains from freer trade and sound economic policies will be sent around the world.

The Administration also initiated and completed a first round of bilateral market liberalization talks with Japan called the Structural Impediments Initiative. The aim of these talks is to open markets and reduce structural barriers to trade and balance of payments adjustment in both the United States and Japan.

INTERNATIONAL MACROECONOMIC ISSUES

The increased integration of the world economy has significant implications for macroeconomic policies. Both monetary and fiscal policies in the United States have fundamental effects on exchange rates and trade flows. These policies also affect the economic performance of other economies, although to a lesser extent than the U.S. economy itself.

American economic leadership requires that U.S. macroeconomic policy maintain an environment conducive to strong noninflationary growth. That will benefit the U.S. economy and contribute to economic growth and stability abroad. A sustainable trade balance and relatively stable exchange rates are part of such a policy environment.

Coordination of macroeconomic policies across countries can help governments increase sustainable growth worldwide. The regular economic meetings of heads of state, finance ministers and other officials of the G-7 nations (United States, Germany, Japan, United Kingdom, France, Canada, and Italy) provide a framework within which economic issues of mutual concern can be discussed. This evolving process of cooperation has achieved some important successes. During the recent expansion, economic growth was strong and inflation rates among countries tended to converge to lower levels. In the last several years, trade imbalances have declined significantly. International macroeconomic policy coordination continues to be essential as the world economy reacts to the effects of the oil price shock and changing credit conditions.

SUPPORT FOR ECONOMIES IN TRANSITION

The emerging democracies of Eastern Europe, many nations in Latin America, and other countries around the world have learned from America's example. As nations adopt democracy, their new leaders turn away from central planning and government control of economic activity and toward reliance on flexible market forces. The economic collapse of communism has made it clear that free people working in free markets are best able to create high and rising living standards.

American support for democracy and free markets throughout the world provided a major impetus to what the President has called the "Revolution of 1989" in Eastern Europe. In 1990 many governments in this region deepened their historic efforts to rebuild their failed economies. Many nations in Latin America increased their reliance on market forces and opened their economies to international trade.

The United States continued to provide extensive technical and financial assistance to the emerging democracies of Eastern Europe, and the President was instrumental in establishing the group of 24 Western governments that has already committed about $20 billion in assistance to Eastern Europe. The United States was also instrumental in encouraging the World Bank and the International Monetary Fund to increase lending in this region. And U.S. initiatives aimed at reducing barriers to trade and investment provided powerful support for the forces of reform in Latin America.

CONCLUSION

Writing on the eve of the American Revolution, Adam Smith was the first to make clear the power of flexible, competitive markets to raise living standards and the costs of misguided interference with market forces. As the United States prepares for a new century, Smith's principles remain central to sound economic policymaking.

Policies that remove barriers to market forces and thus increase the economy's flexibility can encourage investment, innovation, entrepreneurship, and growth. Credible and systematic macroeconomic policies can keep the current downturn mild and brief, add strength to the recovery, and provide the foundation for a sustained expansion in the 1990s. The Administration's proposed growth incentives and its proposals for education and financial sector reform and for giving power and opportunity to individuals, along with its other major initiatives, can significantly contribute to the economy's long-term health and vitality.

In 1991, as always, the United States confronts both economic challenges and exciting opportunities. The U.S. economy remains the largest and most productive in the world, and its flexibility and resilience give America the ability to meet its challenges and make the most of its opportunities. But the Nation cannot take economic growth for granted. Unless sound policies are followed, there is no guarantee that American living standards will continue to rise substantially from one generation to the next or that the United States will remain the world's leading economy. The Nation must choose between sound policies that will promote long-term growth and policies that will reduce economic flexibility, stunt incentives, and place its economic future at risk.

CHAPTER 2

Economic Developments and Prospects

AFTER ALMOST 8 YEARS of expansion, the economy entered a recession during the latter part of 1990. In the fourth quarter of the year, real gross national product (GNP) registered its largest decline since 1982, and industrial production fell sharply. The downturn was caused in large part by the economic effects of Iraq's invasion of Kuwait. That caused a jump in oil prices and directly reduced business and consumer confidence. Those factors, coupled with continuing uncertainty about the timing of the resolution of the crisis, dealt a substantial blow to an economy already sluggish from other factors. These included worldwide increases in interest rates, unexpectedly tight credit conditions, and the lingering effects of a tightening of monetary policy from early 1988 through mid-1989 that was undertaken in a successful attempt to prevent an increase in inflation.

Several factors suggest that the economic downturn is not likely to last long and that a recovery will begin by the middle of 1991. Inflation, after adjusting for the temporary impact of the oil price increase, remained under control during 1990 and slowed at the end of the year, giving the Federal Reserve greater latitude to mitigate the recession without causing an increase in inflation expectations. The prospect for export growth continues to be strong. Inventories remain relatively low, suggesting that firms need not cut production as much as in previous recessions to reduce inventory levels. Interest rates declined toward the end of the year following passage of the new budget law, an easing of monetary policy, and the decline in economic activity. Lower interest rates stimulate credit-sensitive sectors of the economy and, after a lag of several quarters, will increase growth.

The Administration forecasts that growth will be 0.9 percent over the four quarters of 1991. It is expected that the downturn will continue through the first part of 1991 and the recovery will begin around the middle of the year. If the Administration's proposed policies are enacted, the long-term economic outlook is good. Growth should strengthen in 1992 and remain well above the rates of the past 18 months through the mid-1990s. Inflation and interest rates are projected to decline gradually.

Even greater uncertainty surrounds this year's outlook than has been the case for the past few years. The future path of oil prices remains uncertain. An early resolution of the Persian Gulf crisis could restore consumer and business confidence and strengthen growth early in 1991. However, the rapid political changes in Eastern Europe and the economic effects of Iraq's invasion of Kuwait once again illustrate how quickly widely held views about economic prospects can become outdated.

THE U.S. ECONOMY IN 1990

Real GNP grew only 0.3 percent during 1990, well below the very strong 4¼-percent annual rate during 1987–88 (Chart 2-1). Growth in the first part of 1990 was an extension of the modest growth in 1989, when real GNP grew 1.8 percent. But in the last part of 1990 the economy turned down. The unemployment rate rose 0.8 percentage point during the last 6 months of 1990. Despite the increase, the unemployment rate was low compared with the average over the previous 15 years. Consumer price increases excluding food and energy—a measure of core, or underlying, inflation—accelerated in the first quarter but were slowing at the end of the year. These developments in 1990 were influenced by, and in turn, affected monetary policy, fiscal policy, and conditions in credit markets.

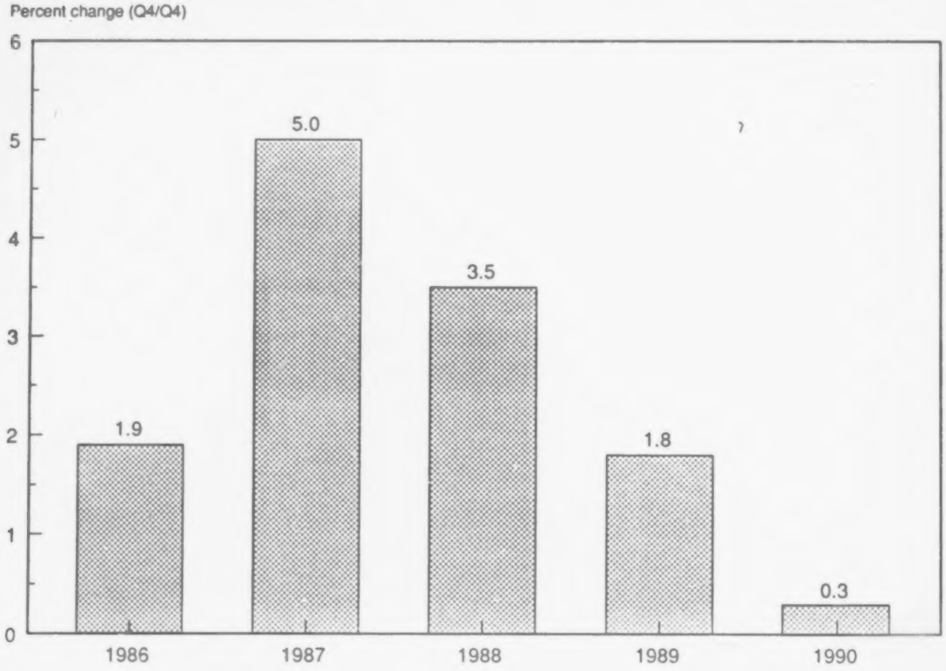
MONETARY POLICY AND CREDIT MARKETS

Monetary policy and credit market developments in 1990 were influenced by policy actions and developments that occurred in previous years. For example, the rapid economic growth in 1987 and 1988 pushed capacity utilization to high levels and reduced unemployment rates to the lowest levels since the early 1970s, but it also spurred serious concern about the possibility of rising inflation. In the spring of 1988, the Federal Reserve began to reduce the flow of money and credit gradually and to increase interest rates. The Federal Reserve's goal was to reduce inflationary pressures by engineering a "soft landing"; that is, by reducing overall demand slowly enough to avoid causing a recession. Since then, the difficulties inherent in distinguishing more permanent threats of rising inflation from temporary but sharp price-level changes, coupled with the long and variable lags through which monetary policy affects economic activity, have complicated the task of predicting the economic consequences of any given level of monetary restraint.

After falling about 1½ percentage points in the second half of 1989, the Federal funds rate remained relatively constant in the first half of 1990, but it declined sharply in the fourth quarter and in early 1991. (The Federal funds rate, a short-term interest rate at

Chart 2-1 **Real GNP Growth**

Real GNP growth slowed in 1990 after rapid growth in 1987 and 1988 and moderate growth in 1989.



Source: Department of Commerce.

which banks lend reserves to other banks, is a short-run indicator of the stance of monetary policy.) Long-term interest rates rose early in the year, then declined slightly before rising again in late summer. In the last quarter they fell sharply, responding to a slowing economy, expected declines in short-term interest rates, and the passage of the new budget law. Throughout the year, evidence mounted that credit was becoming less available, causing serious problems in credit-sensitive sectors.

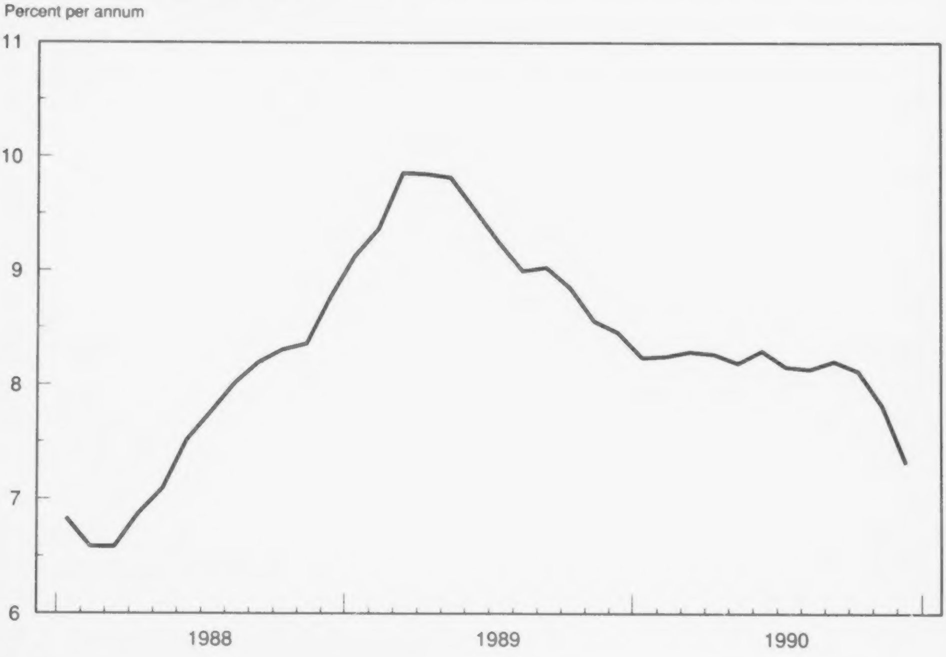
Monetary Policy

The ultimate goal of the Federal Reserve is to promote strong, noninflationary economic growth. The Federal Reserve pursues its goal by influencing interest rates, especially the Federal funds rate, and by regulating the volume of bank reserves relative to demands by depository institutions—reserve availability. Changes in reserves and the Federal funds rate affect the supply of money and credit, inflation, and economic growth. In general, the Federal Reserve acts to raise the Federal funds rate when inflationary pressures increase and economic growth is very rapid, and it acts to lower the Federal funds rate when inflation expectations appear to be falling and weaker economic growth or recession is more likely.

The Federal Reserve maintained a level of reserve availability that resulted in a relatively constant Federal funds rate in the first half of 1990. From January to July the rate averaged 8¼ percent, below the 1989 average, but nearly 1¾ percentage points above its level in early spring 1988, when the Federal Reserve began to tighten policy to contain inflationary pressures (Chart 2–2). This tightening of policy was a factor in lowering economic growth in 1989 and 1990.

Chart 2-2 **Federal Funds Rate**

The Federal funds rate was relatively flat in the first 7 months of 1990 and fell thereafter. By year-end, it had nearly returned to spring 1988 levels.



Note: Data are monthly averages of daily figures.
Source: Board of Governors of the Federal Reserve System.

In July 1990 the Federal Reserve noted that lack of credit in some regional and sectoral markets might be creating a tighter monetary policy than suggested by the level of the Federal funds rate alone. Thus, the Federal Reserve increased the availability of reserves, reducing the Federal funds rate 25 basis points (there are 100 basis points in a percentage point) to 8 percent.

In October the Federal Reserve again increased reserve availability, reducing the Federal funds rate by another 25 basis points. This reduction came soon after the budget summit negotiations were completed and a comprehensive budget plan was proposed. During the rest of the year mounting concern about declining employment and production, lagging money growth, and tight credit conditions led to a series of reductions in the funds rate, resulting in a cumulative decline of 125 basis points from early July. By early February 1991, the Federal funds rate had fallen further to around 6¼ percent, its lowest level in 3 years. In addition, as market interest rates fell at the end of the year, the discount rate—the rate at which the Federal Reserve Banks lend reserves to member institutions—was lowered from 7 percent to 6.5 percent. That was the first reduction in the discount rate since August 1986. An additional reduction to 6 percent occurred in early February 1991.

In December the Federal Reserve eliminated the requirement that banks hold reserves against net Eurodollar liabilities and time deposits held by businesses. That was done to enhance bank incentives to lend, in light of accumulating evidence of credit constraints.

Movements in other short-term interest rates were either similar to or anticipated the general pattern of the Federal funds rate. The rate on 3-month Treasury bills rose slightly over the first few months of 1990. It then declined, evidently reflecting anticipations of later declines in the Federal funds rate, and fell to 6.4 percent by the end of the year.

In addition to considering the Federal funds rate carefully, the Federal Reserve monitors the growth of money and credit and attempts to maintain money supply growth within announced ranges. In February 1990 the Federal Reserve announced it would maintain the 3- to 7-percent target range for growth in its M2 money aggregate, provisionally established in the middle of 1989 for the four quarters of 1990 (see Appendix Table B–67 for definitions of the money supply). The target range for M3 was set at 2½ to 6½ percent for 1990. In July, however, that range was lowered to 1 to 5 percent, as the restructuring of the savings and loan industry reduced actual and expected M3 growth relative to GNP growth. That is, the velocity of M3, the ratio of GNP to M3, appeared likely to have undergone a shift.

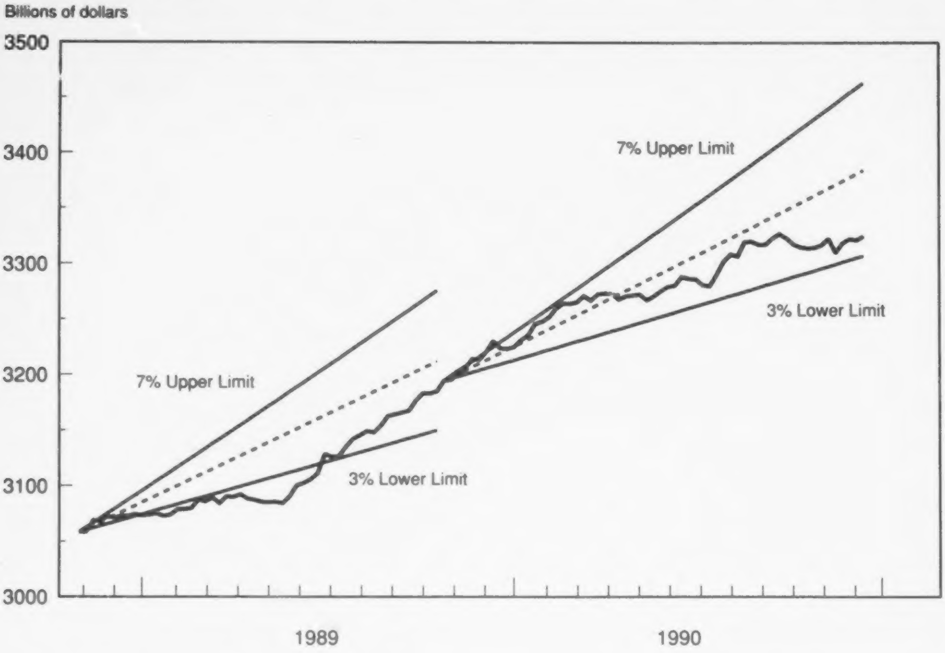
Growth in monetary aggregates was relatively low in 1989. M2 was below the lower bound of the target range through the first half of 1989, although growth accelerated in the second half. M2 growth was 4.6 percent during 1989, below the 5.2-percent growth during 1988. M3 growth was 3.3 percent during 1989, down from 6.3 percent in 1988.

From the fourth quarter of 1989 through the middle of the first quarter of 1990, M2 growth accelerated. However, M2 growth slowed substantially after February, and from early April through the end of the year M2 was consistently in the lower half of the target range. The slower growing economy probably contributed to

lower M2 growth by reducing the public's demand for monetary balances (Chart 2-3). M2 grew 3.7 percent during 1990, while M3 grew 1.5 percent.

Chart 2-3 **Money Supply**

M2 growth was below the middle of the target range in 1989 and stayed in the lower half of the range through most of 1990.



Note: Data are weekly.
Source: Board of Governors of the Federal Reserve System.

Long-Term Interest Rates

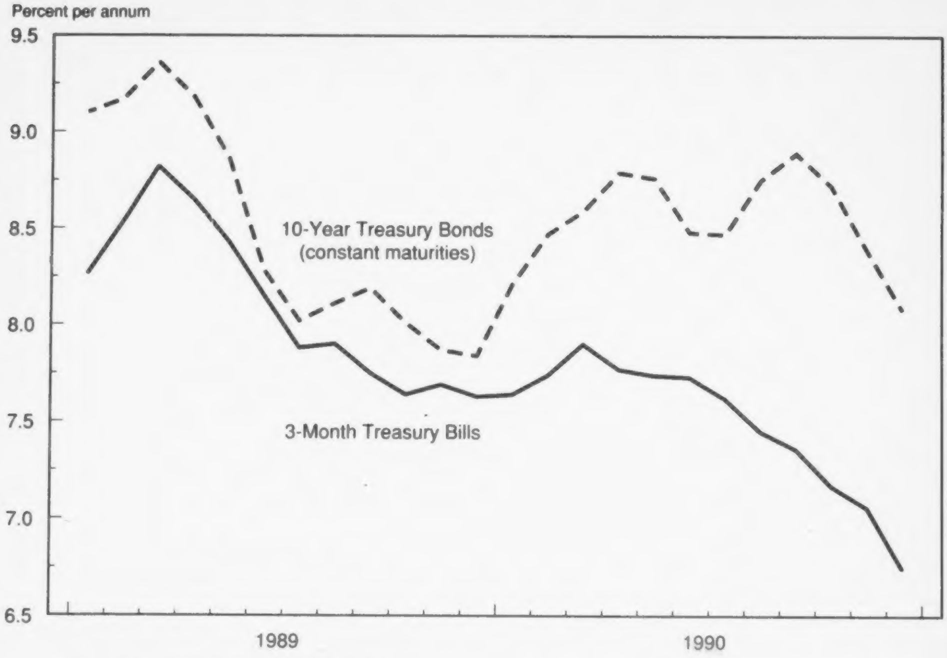
While short-term interest rates were relatively stable in the first half of the year, long-term interest rates were more volatile (Chart 2-4). After declining somewhat in the second half of 1989, long-term rates rose sharply in the first few months of 1990. The yield on 10-year Treasury bonds increased 75 basis points between December 1989 and March 1990.

Concern about a possible increase in the underlying inflation rate caused by the temporary jump in inflation in the first quarter may have contributed to the rise in long-term rates. A more important factor, however, was the anticipated increase in the demand for capital associated with developments in Eastern Europe and the unification of Germany. These events caused interest rates to rise around the world, as shown in Chart 2-5.

The expected increase in the demand for financial capital did in fact materialize during 1990. In 1989 West German governments ran a surplus of about 0.2 percent of gross domestic product (GDP).

Chart 2-4 **Interest Rates**

While short-term rates were relatively flat, long-term rates rose in early 1990. Both fell toward the end of the year.



Note: Data are monthly averages of daily figures.
Source: Board of Governors of the Federal Reserve System.

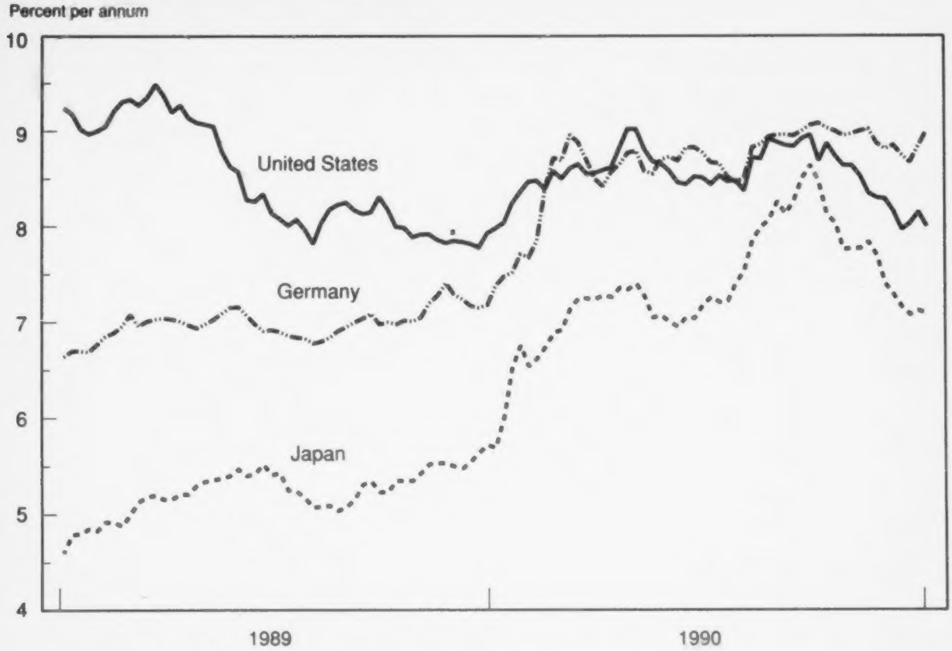
With greater capital needs at home to finance the rebuilding of the deteriorated infrastructure of the former German Democratic Republic, the surplus became a deficit of about 3 percent of GDP in 1990. Because long-term interest rates in the United States are influenced by developments in world markets, and because those rates play a large role in determining real economic activity, their rise contributed to the domestic economic slowdown in the United States.

After peaking in May, long-term rates fell 65 basis points through the end of July. This drop was erased after Iraq invaded Kuwait. The jump in oil prices renewed concerns about the risks of higher inflation. The general uncertainty surrounding the Persian Gulf crisis, and, in particular, about the future course of oil prices, increased the riskiness of lending funds for the longer term and put upward pressure on interest rates.

By mid-December, however, long-term rates had fallen back to their early January levels, with the yield on 10-year Treasury bonds reaching 8 percent before rising slightly at the very end of the year. One reason long-term rates began to fall was the expectation that the multiyear budget law would lower the Federal Gov-

Chart 2-5 **Long-Term Government Bond Yields**

Long-term bond yields rose around the world in early 1990, pushed up by increased demand for capital and concerns about accelerating inflation.



Note: Data are weekly average of daily figures.
Source: Board of Governors of the Federal Reserve System.

ernment's future credit demands and thus ease demand pressure in long-term credit markets. Other factors including falling oil prices in late November and December, declining economic activity, and easing monetary policy also contributed substantially to the decline.

Credit Market Developments

By midyear, surveys indicated that bank lending standards had tightened and that credit was becoming more difficult to obtain. As the year progressed, the effects of the tightening began to appear in aggregate bank lending figures. From August through October commercial and industrial loans at commercial banks fell at an annual rate of 3.3 percent. In addition, a Federal Reserve survey of senior bank lending officers in October reported that nearly two-thirds of respondents had tightened their lending standards for construction and land development loans in the previous 3 months, and almost half had tightened their standards on commercial and industrial loans. Overall, bank credit increased about 5.1 percent during 1990, compared to a 6.9-percent rise during 1989.

Tightened lending standards and slower growth in bank lending were partly the result of a sluggish economy. Demand for credit usually falls as the overall economy weakens. Moreover, as the economy slows, the probability of bankruptcy increases. To compensate for the increased risk of lending, lending standards may have become stricter. Concerns about overzealous bank examiners may have discouraged some banks from making loans, and declining real estate values reduced the value of collateral on residential and commercial real estate loans.

Tighter lending standards during the year cannot be entirely attributed to caution in the face of a slow economy or an anticipated recession. The restructuring of bank lending portfolios in anticipation of meeting the capital guidelines established in the Basle framework, an international banking agreement setting minimum capital adequacy requirements, also contributed to credit market tightness. The new guidelines require higher capital reserves on loans with greater risk of default. Thus, for example, more capital must be held against a portfolio of commercial and industrial loans than against a portfolio of equal size that contains only government-backed securities. By changing the relative cost of different types of assets, these guidelines changed the incentives for extending different types of credit. Thus, while the growth of commercial and industrial loans by banks slowed during 1990, the growth of bank credit extended to governments or borrowers with government guarantees increased.

Although business borrowing from banks slowed in 1990, business borrowing from other sources offset some of the slowdown. Overall domestic nonfinancial sector debt (excluding Federal debt) was up 5.6 percent at an annual rate for the first 11 months of 1990. By October and November, however, this debt was rising at a slower 4 percent rate. These rates were lower than the 1989 growth rate of 7.6 percent.

FEDERAL BUDGET DEVELOPMENTS

Federal spending, tax, and borrowing activities have an important influence over economic activity. The slowdown in the economy and the large financial transactions associated with the resolution of the savings and loan (S&L) crisis require that particular care be taken in describing budgetary and deficit changes for 1990 and beyond.

In fiscal 1990 (October 1989 through September 1990) total Federal expenditures were $1,253 billion. Transfer payments (including grants-in-aid to State and local governments) accounted for roughly half this total. Federal purchases of goods and services accounted for one-third of Federal spending. The other major component was interest payments on the Federal debt. Among these components, the largest increase from fiscal 1989 occurred in transfer payments, which grew 9.6 percent. Federal purchases of goods and services rose 4.3 percent.

Federal tax receipts grew more slowly in fiscal 1990 than in fiscal 1989. That was mainly a result of two factors: slower growth in household income, which reduced the growth of individual income and payroll tax payments; and falling business profits, which reduced corporate income tax receipts. Corporate profits were $299 billion in fiscal 1990, down from $326 billion in fiscal 1989. Corporate income tax receipts fell 9.7 percent in fiscal 1990, after rising 9.6 percent in fiscal 1989. Total receipts rose 4.1 percent in fiscal 1990, compared with 9 percent in fiscal 1989.

The Federal Deficit

From 1979 to 1983 the consolidated Federal budget deficit as a percentage of GNP increased steadily to 6.3 percent, its highest level since World War II. (The difference between Federal outlays and receipts is the deficit.) The deficit-to-GNP ratio was around 5.2 percent between 1984 and 1986, and then fell to its recent low of 3 percent in 1989, primarily as a consequence of reductions in Federal spending. Since 1980 the ratio of tax receipts to GNP has been 19 percent, while the ratio of outlays to GNP has been 23.1 percent.

The ratio of the deficit to GNP rose in 1990, mostly due to spending increases. The ratio was expected to remain high, which led to concerns that interest rates would also remain high, harming prospects for long-run growth. *These concerns led to enactment of the Omnibus Budget Reconciliation Act, signed in November 1990. The budget law is expected to reduce future deficits substantially from what they would have been in the absence of the act.* Nevertheless, by all conventional measures the current deficit is large and will remain large during the next few years.

Federal budget accounting distinguishes between *on-budget* and *off-budget* outlays and receipts. The more comprehensive *consolidated budget* combines both on-budget and off-budget accounts. Some items are classified as off-budget based on economic reasons; others, for legislative or government accounting reasons. Currently, outlays and receipts of the Social Security trust funds are off-budget, yet changes in these trust funds affect total government saving and thereby the net borrowing requirements of the Federal Government. In fiscal 1990 Social Security receipts exceeded outlays, which was the main factor leading to an off-budget surplus of $57 billion. As a result, the fiscal 1990 on-budget deficit of $277 billion substantially exceeded the $220 billion *consolidated budget* deficit.

The financial transactions of the Resolution Trust Corporation (RTC) and other deposit insurance programs have made the interpretation of the effect of the budget on the economy more complex. The RTC reimburses federally insured depositors in failed savings and loan institutions. The funds required to pay the full value of these deposits are large, and the problems created by the incentives associated with deposit insurance have had negative effects on the economy (see Chapter 5 for a discussion of deposit insurance).

Transactions of the RTC and other deposit insurance programs are classified as on-budget. Unlike most other on-budget expenditures and receipts, however, these transactions have little effect on interest rates and the overall economy. Though they are valuable for other reasons, measures of the budget deficit that include deposit insurance financing can be misleading for evaluating the macroeconomic effects of the deficit. As noted above, for this purpose, deposit insurance outlays should be excluded and the Social Security surplus included. *Hence, of the various accounting measures, movements in the consolidated budget deficit excluding deposit insurance probably best measure the impact of Federal borrowing on credit markets and the economy.*

To understand how borrowing to cover deposit insurance differs from borrowing to cover other government outlays, consider the following example. Suppose the RTC acquires a failed S&L with insured deposits of $100 million and assets, such as mortgages and loans, worth only $85 million. To do this, the RTC would borrow $100 million to pay off the depositors and acquire the S&L's assets worth $85 million. The remaining $15 million is an accrual of net Federal indebtedness and acknowledges the liabilities incurred earlier when the S&L could no longer support the insured depositors. (This portion of the RTC outlays is sometimes termed "hole-filling.") The entire $100 million paid out to depositors is likely to be redeposited in the financial sector. The depositors chose to hold $100 million in the S&L on the assumption their money was safe; the RTC's confirmation of its safety is unlikely to cause them to change the level of deposits they hold or any other aspect of their economic behavior.

There are also unlikely to be any credit-market effects. The RTC has directly or indirectly provided $100 million to honor the deposit insurance commitment to depositors. Since these funds are likely to be redeposited, the financial sector can be expected to receive an infusion of $100 million that solvent institutions will want to invest in interest-bearing assets. The increased demand for assets corresponds exactly to the $100 million increase in assets the government sells to the market. Therefore, in contrast to what happens when the government borrows to purchase goods and services, there will be no direct effects on interest rates in the financial sector.

The acquisition and subsequent disposition of S&L assets by the RTC are expected to lead to a large swing in the consolidated and on-budget deficit measures. Net RTC expenditures are currently large because the RTC is acquiring insolvent S&Ls and paying out funds to depositors. By fiscal 1992, these expenditures are projected to be falling; that is, expenditures for acquiring S&L assets minus the receipts from sales of these assets are expected to be smaller than in the preceding year.

An alternative measure of the deficit that is useful for assessing the effects of the deficit on credit markets and the economy comes from the national income and product accounts (NIPA), published by the Department of Commerce. The NIPA deficit does not include transactions, such as loans, that are an exchange of existing assets and liabilities. Accordingly, nonadministrative RTC and deposit insurance funding are excluded from the NIPA deficit, and the Social Security surplus is included. On a NIPA basis, the Federal deficit was $158 billion in fiscal 1990, an increase of roughly $28 billion from 1989. In contrast, the consolidated deficit was $220 billion in fiscal 1990, an increase of $68 billion from 1989.

It is also important to distinguish between the actual deficit and the structural deficit, especially when the economy is in a downturn or boom. In a downturn, tax revenues decrease and expenditures, especially for entitlement programs such as unemployment insurance, increase. The rising deficit that results helps keep the economy from going deeper into recession. During booms the opposite happens, and the falling deficit helps keep the economy from overheating. The structural deficit removes the effects of these swings in economic activity from the deficit calculation by assuming a steady level of employment and trend GNP growth. This cyclical adjustment can be made in both the consolidated budget deficit and the NIPA budget deficit measures. *In fiscal 1990 the NIPA structural budget deficit was only about $9 billion higher than in 1989, compared with a $28 billion increase for the actual NIPA deficit. That difference suggests that the economic slowdown accounted for more than two-thirds of the increase in the actual NIPA deficit in 1990.*

All these deficit measures are typically reported in current dollars. Even if spending and receipts were to increase only at the rate of inflation, the deficit would rise. Moreover, the economic effects of the Federal deficit depend on its size in relation to the size of the economy. To adjust for the economy's size, the ratio of the deficit to GNP is often reported. Even though the structural deficit increased slightly from 1989 to 1990, for instance, it declined slightly as a percent of GNP.

Other issues arise when measuring the deficit and interpreting its economic effects. Some economists have argued that deficit measures should reflect the reduction in the real value of outstanding liabilities caused by inflation. With a Federal debt held by the public of roughly $2.5 trillion, an inflation rate of 4 percent would reduce the real value of the debt outstanding by about $100 billion in one year. This revaluation lowers the real value of government liabilities and therefore could be thought of as lowering the deficit. But even with this adjustment the deficit would still be large.

The economic importance of the deficit depends, in part, on the level of private saving. By definition, a decrease in the budget deficit increases public saving. Private saving plus public saving constitute national saving, which, together with inflows of foreign capital, provides the funds available for investment in the United States. Low public saving caused by a large Federal deficit is particularly detrimental to investment and future economic growth when private saving is low, as it has been for several years.

ECONOMIC GROWTH AND EMPLOYMENT

The growth slowdown during 1990, as in 1989, was concentrated in interest- and credit-sensitive sectors such as residential investment, commercial real estate, and consumer spending on durable goods. In addition, export growth slowed from its extremely fast pace of the previous 3 years. The manufacturing sector was hard hit as both production and employment fell.

Consumption and Saving

Consumer spending rose 0.2 percent in real terms during 1990, below the 1.2-percent growth in 1989 and substantially below the rates of the mid-1980s (Table 2–1). (Spending in real, or inflation-adjusted, terms is measured in constant 1982 dollars. Box 2–1 describes an important upcoming NIPA data revision.) Real disposable personal income, a key determinant of consumer spending, fell 0.4 percent during 1990. That compares with a 1.7-percent gain in 1989 and a 4.3-percent rise during 1988. Consumer outlays and income rose at roughly the same rate in 1990, leaving the personal saving rate at 4.5 percent, essentially unchanged from its average 1989 value. While the saving rate for 1990 was substantially above the 1987 low of 2.9 percent, it remained well below the 6.5-percent average of the post-World War II period and below that of most other industrialized countries.

Spending on consumer services rose 2.2 percent during 1990, led by a 6.5-percent spending increase in medical care. However, consumer purchases of nondurable goods, of which food and clothing account for nearly 70 percent, fell during the year, after a slight 0.7-percent rise during 1989. Rising gasoline prices reduced real spending on gasoline and also contributed to the decline in spending on nondurables.

Consumer purchases of durable goods declined during 1990. Interest rates on consumer loans, frequently used to finance purchases of durable goods, remained high during the year. Measures

TABLE 2-1.—*Growth of Real GNP and Components, 1982-90*

Item	1982 to 1986 [1]	1987	1988	1989	1990 [2]
	Percent change, fourth quarter to fourth quarter				
GNP	4.3	5.0	3.5	1.8	0.3
Personal consumption expenditures	4.5	2.3	4.1	1.2	.2
Nonresidential fixed investment	5.5	6.1	5.3	4.5	.9
Residential investment	14.7	−2.2	−.1	−7.1	−8.7
Government purchases of goods and services	4.1	2.0	1.1	.3	3.8
	Annual level, billions of 1982 dollars				
Inventory investment	17.7	22.8	23.6	23.8	−1.1
Net exports of goods and services	−84.5	−118.5	−75.9	−54.1	−37.5

[1] Average annual rate.
[2] Preliminary.
Source: Department of Commerce.

of consumer confidence, which often are directly related to purchases of durables, plunged in the last 5 months of the year. Spending on motor vehicles declined, and the number of autos sold during 1990 was down 4 percent from 1989, the second straight yearly decline.

Several additional factors contributed to declining automobile demand, including the large number of vehicles already owned by consumers and the tendency for owners to keep vehicles longer. Financing arrangements also contributed to weak sales. Interest rates on new car loans remained high, the average length of auto loans fell, and lenders required larger downpayments.

Residential Investment

In 1990 residential investment was 5.1 percent below its 1989 level, the third straight year of decline. Housing starts reached their lowest levels since 1982, averaging more than 13 percent below 1989. For all of 1990, starts in the Northeast were only 44 percent of their recent 1986 peak. For the country as a whole, multiunit starts continued their 5-year slide.

Many factors contributed to the decline in residential investment. Housing starts were held down by oversupply in many regions. Vacancy rates for rental housing units remained relatively high. Builders and developers found credit more difficult to obtain. The low growth of consumer income in 1990 and rising mortgage rates in the first half kept demand low.

House prices rose in the early part of 1990 but declined somewhat during the rest of the year. The median price of a new single-family house reached $130,000 in April 1990, before declining by 7.7 percent by November. For the year the median new house price rose 2.5 percent, its smallest rise since 1982. In the fourth quarter of 1990, prices of existing homes were down nationally about 1 per-

Box 2-1.—Revised National Income and Product Accounts

The Bureau of Economic Analysis (BEA) produces the U.S. national income and product accounts, the most comprehensive and consistent set of production and income statistics available for the United States. The NIPA are frequently revised as new data arrive and measuring methods are improved. In the first month after the end of a calendar quarter, the GNP accounts are released for the previous quarter. These data, the *advance* figures, are revised in the following 2 months as data for the previous quarter continue to arrive and be processed. These monthly revisions are called the *preliminary* and the *final*. Every year, BEA releases revisions to the NIPA for the current and the previous 3 years, reflecting new data from various annual surveys and other information not available when the final estimate is released.

About every 5 years BEA produces a comprehensive "benchmark" revision, in which all NIPA components are subject to change. In the upcoming benchmark revision, the base year for the calculation of constant-dollar (inflation-adjusted, or real) GNP will change from 1982 to 1987.

Real GNP measures the value of goods and services the Nation produces at prices in a given "base" year. Valuing the goods and services at one year's prices is necessary so that physical quantities of goods can be added meaningfully and compared across time. Since late 1985 the base year has been 1982.

Maintaining the base year for too many years, however, results in an increasingly inaccurate picture of the economy, since the importance of goods with high relative prices in the base year tends to be overemphasized. This bias is likely to be more important as the economy moves further away from the base year, because producers and consumers are likely to be using fewer goods with high relative prices. Moving to 1987 as a base year should provide a better picture of the current economy, since the current price structure is more like the 1987 structure than the 1982 structure.

The differing relative price structure between 1982 and 1987 will result in different real GNP growth rates when measured in constant 1982 and constant 1987 dollars. Since early 1989, BEA has published a small set of GNP data in 1987 dollars in addition to 1982-dollar data. Between 1983 and 1989 real growth averaged 3.6 percent in 1987 dollars and 3.9 percent in 1982 dollars. The difference is typical of benchmark revisions and reflects the size of the bias that builds up as the base year becomes more distant.

cent from their average in 1989. Prices fell even more in the regions most affected by the economic slowdown, such as New England.

Business Fixed Investment

Business fixed investment—spending by businesses on new plant and equipment—grew 0.9 percent in real terms during 1990. Spending on new structures was down 5 percent, with continued weakness in new office-building construction. An oversupply of offices—vacancy rates nationwide were around 20 percent in the third quarter of the year—reduced new construction activity. However, spending on industrial buildings—new plants—was up 8.4 percent during 1990, after a nearly 20-percent increase in 1989.

Total equipment purchases rose 2.8 percent in real terms during 1990. Information-processing and related equipment continued to increase faster than total equipment purchases, rising 3.3 percent during the year. Auto purchases by businesses jumped 12.4 percent, but industrial equipment purchases fell during 1990.

Inventory Change

The real level of business inventories fell by $1.1 billion in 1990, and the ratio of real inventories to sales was below the 1989 figure. *This is unusual during the early stages of a downturn, and is one factor pointing to a mild recession rather than a more serious slide.* In most business cycles, an overaccumulation of inventories toward the end of the expansion leads to production shutdowns and layoffs, creating a sharper downturn in production and employment than the underlying demand conditions would have produced. Some economists suggest that computerization and the adoption of new inventory and production management techniques (the just-in-time method, for example) during the last decade have allowed firms to reduce the size of their normal inventory holdings and to respond more flexibly to changing economic circumstances. With inventories relatively low at the start of this downturn, a protracted period of inventory reduction that would deepen the downturn is less likely than in the typical postwar recession.

Exports and Imports

Export growth was strong in the second half of the expansion, averaging 14.6 percent at an annual rate between the fourth quarter of 1986 and the fourth quarter of 1989. Though growth in real exports of goods and services slipped to 5 percent in 1990, real exports reached an all-time high during the year, and the United States remained the world's largest exporter. Some categories of exports were stronger than others. Exports of capital goods rose 8.2 percent and exports of consumer goods rose a strong 17.5 percent. Exports of foods, feeds, and beverages fell during 1990.

Exports of services (other than profits and interest income) have become increasingly important to the economy, accounting for about 17 percent of total exports in 1990. For the year as a whole, exports of services rose 7.7 percent in real terms, compared with merchandise export growth of 8.6 percent.

Two of the major determinants of export demand contributed to slower export growth. First, although it remained at relatively low levels compared with the mid-1980s, the foreign exchange value of the dollar rose about 16 percent from late 1988 to June 1989. By December 1989, it was still 3.3 percent above its level in December 1988. Changes in demand for U.S. exports lag behind price changes, so by increasing the price of U.S. exports in overseas markets, the dollar's rise through most of 1989 may have helped to reduce demand for U.S. export products in 1990. In contrast to 1989, the dollar fell during most of 1990. By December it had fallen almost 7 percent against the yen and almost 14 percent against the deutsche mark compared with December 1989. All else being equal, the declining dollar in 1990 points to rising export growth in 1991.

Slower growth in countries that trade extensively with the United States also contributed to slower export growth in 1990. For example, Canada, which typically accounts for about 22 percent of our merchandise exports, and the United Kingdom both were in a recession in the second half of 1990. Growth also slowed in other European economies in 1990 (Table 2–2). However, growth in Germany and Japan increased in 1990. For the first 11 months of 1990, the merchandise trade deficit with Japan was down about 17 percent compared with the first 11 months of 1989.

TABLE 2–2.—*Economic Performance and Projections for the United States and Other G–7 Nations, 1989–90* [1]

[Percent]

Country	Real GNP growth		Consumer price inflation [2]		Total unemployment rate	
	1989	1990	1989	1990	1989	1990
Canada	3.0	1.1	4.7	4.1	7.5	8.1
France	3.6	2.5	3.3	3.4	9.4	8.9
Germany	3.9	4.2	3.2	2.6	5.6	5.0
Italy	3.2	2.6	6.0	6.3	12.1	11.1
Japan	4.9	6.1	1.7	2.4	2.3	2.1
United Kingdom	2.2	1.6	5.9	4.6	6.2	5.8
United States	2.5	.9	4.8	5.2	5.2	5.4

[1] Data for 1990 are projections, except for the United States, which are preliminary full-year estimates.

[2] Consumer prices are measured by the private consumption deflator.

Note.—Data for GNP growth and price inflation are percent changes from previous year.
Data for Germany are only for western Germany.

Source: Organization for Economic Cooperation and Development, *OECD Economic Outlook*, December 1990; Department of Commerce; and Department of Labor.

Imports grew 3.2 percent in 1990, compared with a 6-percent increase in 1989. In contrast to the early part of the expansion, when imports of consumer goods and autos rose rapidly, consumer goods and auto imports posted almost no increase in 1990. Instead, capital goods imports were the fastest growing major category of imports. For the year, real petroleum imports were up 2.5 percent; however, they fell sharply in the fourth quarter.

As a result of continued export growth and slowing import growth, the real net export deficit narrowed for the fourth consecutive year. By the end of the year, the real net export deficit was at its lowest level since mid-1983.

Government Purchases of Goods and Services

Government purchases of goods and services, at the Federal, State, and local levels, grew 3.8 percent in real terms during 1990. Federal purchases rose 5.5 percent. Nondefense purchases rose 8.3 percent; however, excluding changes in Commodity Credit Corporation inventories, nondefense purchases rose 3.8 percent. Defense purchases rose 4.7 percent during 1990, with an increase in the fourth quarter partially reflecting spending in support of Operation Desert Shield. State and local purchases rose 2.5 percent during 1990, with a relatively strong 8.2-percent increase in spending on structures.

Industrial Production and Capacity Utilization

Sluggish consumer spending on goods, falling residential construction, and slowing export growth caused manufacturing output to fall during 1990 after slowing substantially in 1989. Sharp declines in the fourth quarter led to a 1.4-percent fall in overall industrial production during 1990, as production of motor vehicles fell more than 20 percent. Excluding motor vehicles and parts, industrial production fell 0.5 percent during 1990, compared with a 1.8-percent rise during 1989.

Slowing production in the first half and falling production in the second half pushed down capacity utilization in the industrial sector 3.3 percentage points during 1990. In December capacity utilization in manufacturing fell to 79.3 percent, well below the 85-percent rate in April 1989, its recent peak. Utilization rates generally declined across all industries. Utilization in motor vehicle manufacturing fell to 57 percent.

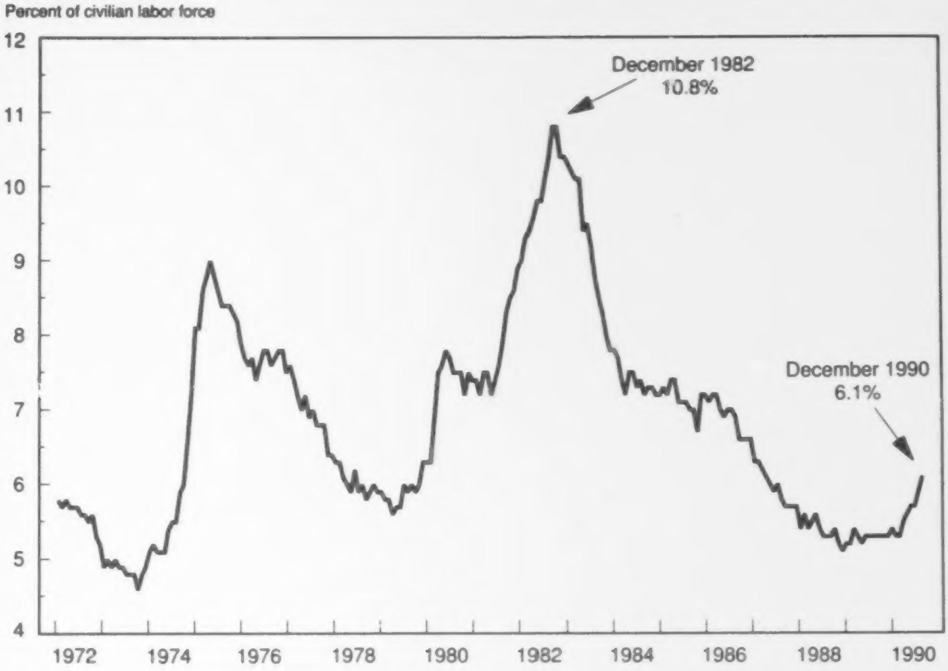
Employment

The civilian unemployment rate rose in the second half of 1990, after remaining around a 15-year low for most of 1989 and the first half of 1990. By December the unemployment rate had risen to 6.1 percent, about where it had been in mid-1987 (Chart 2–6). From June to December the jobless rate for men rose 0.9 percentage point, while the rate for women rose 0.7 percentage point. In the second half of the year, the unemployment rate rose 1.5 percentage points for blacks and 1.9 percentage points for teenagers. For the entire year the civilian unemployment rate averaged 5.5 percent.

Labor force growth slowed in 1990, particularly in the first half of the year. The labor force grew by about 250,000 people in the

Chart 2-6 **The Unemployment Rate**

The unemployment rate rose in late 1990 but was still low compared to much of the period since the early 1970s.



Source: Department of Labor.

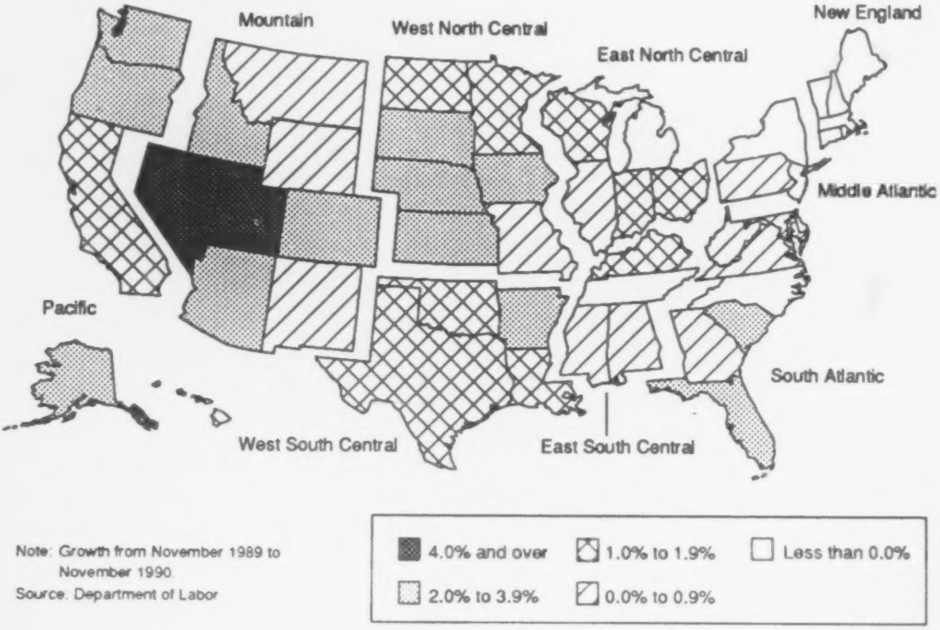
first half, about a quarter of the average gain experienced in the first halves of 1988 and 1989. Much of the slowdown in the first part of 1990 can be traced to a decline in the teenage labor force, which fell by more than 500,000 people. The slower labor force growth, due at least in part to the softening economy, contributed to the stability of the unemployment rate in the first half of the year and tempered the increases in the second half.

There was a net gain of about 650,000 jobs in 1990, following a gain of over 2 million jobs in 1989. The net gain for the year consisted of an increase of about 1.4 million jobs in the first 6 months of the year, followed by a decrease of 810,000 jobs in the second half. The number of service-producing jobs rose by 1.4 million during the year, but the number of jobs in the goods-producing sector fell by 790,000. Temporary hiring to conduct the 1990 census accounted for some of the first-half gain and second-half decline. Census hiring added about 365,000 jobs to the first-half gain. The reduction in the census work force following completion of the census accounted for about 45 percent of the second-half decline.

Although overall employment growth slowed in 1990, the slowdown was spread unevenly across industries and regions. Every industry is affected by both general economic conditions and factors unique to its business. As a result, during general upswings in economic activity some industries and regions experience shrinking employment and income. Likewise, in downturns, some continue to grow. Chart 2-7 illustrates differences in regional employment growth during 1990, and Box 2-2 summarizes the year's industrial and regional developments.

Chart 2-7 **Regional Employment Growth**

Employment declines were concentrated in New England, while employment grew fastest in the Mountain and Pacific regions.


Mountain
West North Central
East North Central
New England
Middle Atlantic
Pacific
South Atlantic
West South Central
East South Central
4.0% and over
1.0% to 1.9%
Less than 0.0%
2.0% to 3.9%
0.0% to 0.9%

Note: Growth from November 1989 to November 1990.
Source: Department of Labor

Productivity

Growth in labor productivity in the nonfarm business sector fell 0.8 percent in 1990. Low or negative labor productivity growth is typical in an economic slowdown, as firms tend to keep workers even when demand slows in order to avoid costly search and training when demand increases again.

Manufacturing productivity continued its recent trend of relatively strong growth compared with other sectors. Manufacturing productivity grew 3 percent in 1990, compared with 3.3 percent in 1989. Rising labor productivity in manufacturing helped to hold the growth of unit labor costs to 0.3 percent, after a 0.6-percent rise in 1989. Very slow growth of unit labor costs in manufacturing is one

Box 2-2.—Sectoral and Regional Income and Employment

During any phase of the business cycle, some industries shrink or grow slowly while others expand rapidly. Differences in employment growth across regions depend on the particular mix of expanding and contracting industries in each region. Much of the decline in employment in 1990 in both New England and the Middle Atlantic States can, for example, be traced to the contraction in the construction, real estate, and finance industries. Regions dependent on durable-goods manufacturing were hurt by declining sales of consumer durables such as automobiles. Total manufacturing employment fell by about 570,000 over the year, with more than 79 percent of the decline coming from durable goods manufacturing industries.

Some regions had relatively strong employment gains in 1990. Employment in the Mountain region was bolstered by employment gains in service industries, particularly recreation and tourism. Although the decline in construction has hurt the timber industry in the Pacific Northwest, the region's diversified industrial base, especially in the production of aircraft and high-technology goods, permitted relatively strong overall employment growth.

However, the changing fortunes of most industries have effects that are spread out across all regions. The contraction in the construction industry was felt nationwide as housing starts reached their lowest levels since 1982. Reflecting the sharp decline in the residential housing market, jobs in construction and real estate declined in the second half of the year.

Sluggish orders and sales contributed to the slowdown in employment growth in wholesale and retail trade across all regions. In contrast, all regions gained from the substantial growth in health services, which accounted for nearly 82 percent of the net job gain in the economy over the year. Softening business activity across the country was reflected in the fourth quarter decline in business services employment, which provides support services such as data-processing and advertising.

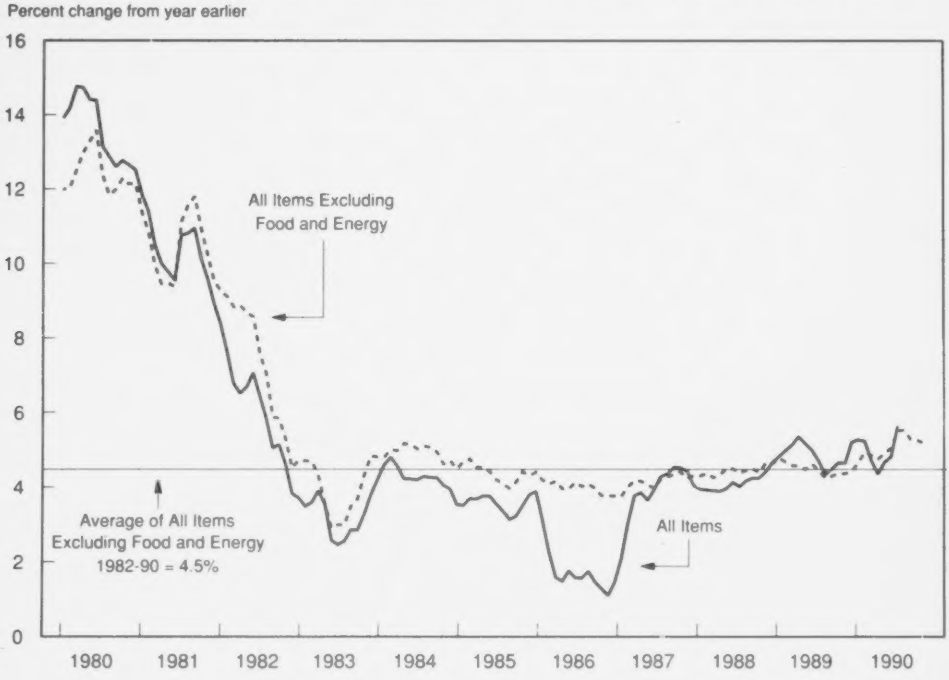
indicator that underlying inflationary pressures did not rise in 1990.

PRICES AND WAGES

Compared with the expansions of the 1970s, inflation remained relatively low and stable throughout most of the recent expansion, which contributed greatly to its longevity. Consumer price inflation averaged only 3.1 percent a year from the business cycle trough in November 1982 through December 1986. Core consumer price inflation averaged a higher but steadier 4.3 percent over the same period (Chart 2-8). Much of the reduction in inflation from the late 1970s and early 1980s was due to the successful imposition and maintenance of a stable and credible monetary policy.

Chart 2-8 **Consumer Prices**

Overall consumer price inflation rose temporarily in 1990. However, "core" inflation, a measure that excludes food and energy prices, remained under control and was declining at the end of the year.



Source: Department of Labor.

Broad-based measures of inflation indicated that inflation was contained in 1990. The GNP fixed-weighted price index, a measure that includes prices of all goods and services in the economy rather than just consumer goods and services, was up 4.5 percent in 1990, the same as in 1989. After rising substantially in the first quarter of 1990, inflation measured by this index was below the 1989 average in each of the last three quarters of the year.

Price developments in early 1990 resembled those of the first half of 1989 when a temporary rise in crude oil and food prices pushed consumer price inflation to 5.7 percent. Consumer and producer prices were buffeted by the effects of unusually cold weather in December 1989, which substantially reduced available supplies of fresh fruit and vegetables and drove up the cost of petroleum-based fuels. Led by price increases in energy and food, consumer price inflation rose to an annual rate of 8.5 percent from December

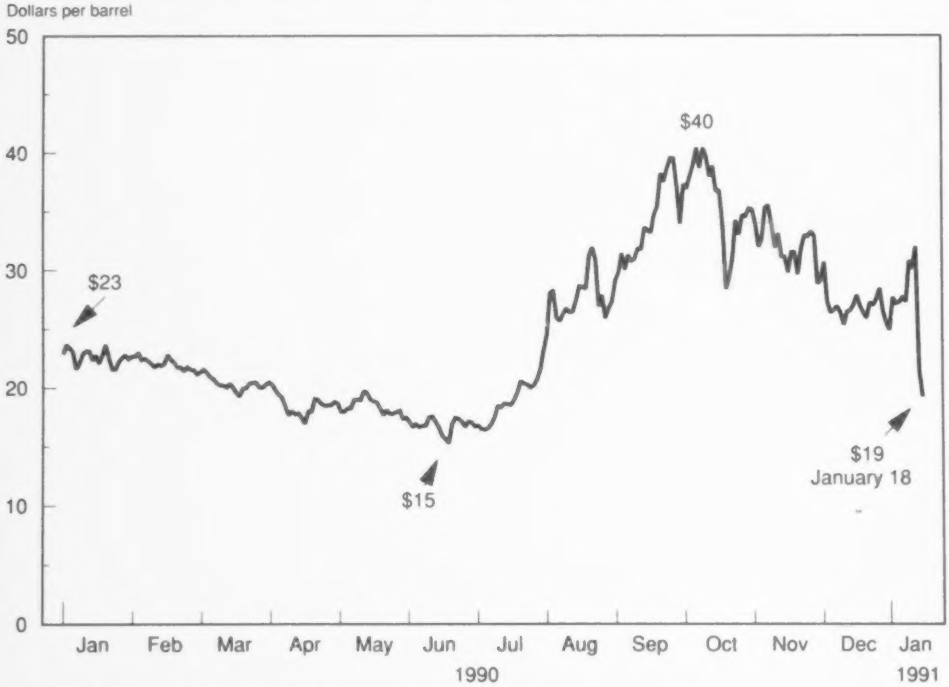
1989 to March 1990. A more than 21-percent annual rate increase in apparel prices contributed to core consumer price inflation of 7.5 percent in the first quarter.

By the middle of the year, smaller food price increases and falling oil prices were reducing inflation. From March to June, consumer prices rose at a 3.5-percent annual rate, and producer prices for finished goods rose at a negligible 0.3-percent annual rate. Core inflation also retreated substantially, to 3.9 percent at an annual rate.

The Iraqi invasion of Kuwait in early August and its impact on oil prices dominated price-level movements in the second half of 1990. Crude oil prices jumped from $22 a barrel on August 1, the day before the invasion, to their 1990 peak of $40 a barrel in the middle of October (Chart 2-9). Prices retreated below $26 a barrel before ending the year at around $28 a barrel. Oil prices fell rapidly to around $20 a barrel in early 1991, following the beginning of Operation Desert Storm.

Chart 2-9 **Oil Prices**

Crude oil prices more than doubled from early summer to mid-October but fell thereafter.



Note: West Texas Intermediate crude, nearest month futures contract.
Source: New York Mercantile Exchange.

Consumer and producer energy prices responded quickly to the August oil price shock. In the last quarter of 1990, prices of other goods and services that rely heavily on oil as fuel or as material input rose in response to rising energy costs. For example, public transportation prices rose more than 32 percent at an annual rate, primarily because of rising airline fares. The surge in energy and energy-related prices contributed to overall consumer prices rising at an annual rate of 6.4 percent in the second half of the year. The oil price decline since October reduced inflation in November and December and should continue to reduce consumer and producer price inflation in the early part of 1991.

Excluding food and energy, the consumer price increase of 4.8 percent in the second half of 1990 was far more moderate than the overall increase in prices. In addition, producer prices for goods before any processing, excluding food and energy, fell for the last 4 months of the year, suggesting that slowing economic activity was reducing upward pressure on prices.

Although price changes were affected primarily by changes in energy and, to a lesser extent, food prices, some longer run inflation trends continued in 1990. Price increases for consumer services continued to rise faster than those for consumer goods. From 1982 to 1989 services prices rose 4.8 percent at an annual rate, while prices for consumer goods less food and energy rose 3.3 percent. During 1990 the services price index rose 5.7 percent, led by a 9.9-percent rise in the price of medical care services.

Wage inflation moderated in 1990, an indication that the underlying inflation rate was under control and even declining. The growth in the employment cost index, a measure that includes the cost of employer-paid benefits as well as wages and salaries, began to fall in the last three quarters of 1990 after rising consistently throughout 1989 and the first quarter of 1990 (Chart 2–10). Continuing a trend from the last few years, benefits increased at a faster pace than wages and salaries: 6.6 percent compared with 4 percent during 1990.

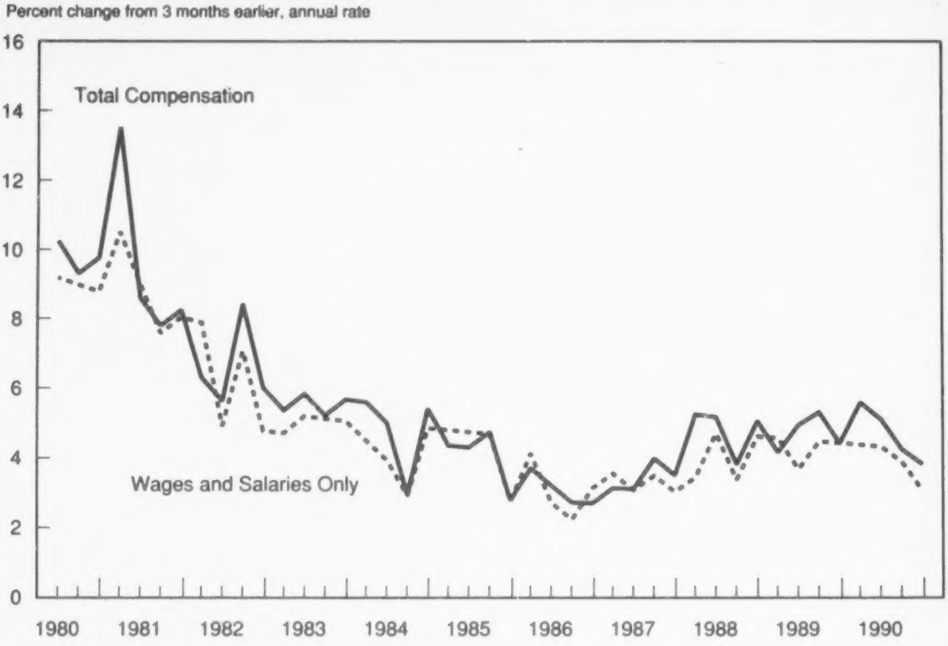
Indicators point to moderating inflation in the future. The Commodity Research Bureau's index of futures prices for raw commodities, which fell 8.2 percent during 1989, reached a peak in May 1990 and fell at an annual rate of 16 percent through the rest of the year. A sustained decline of this size suggests continuing moderation of producer and consumer goods prices.

SUMMARY

- After growing sluggishly for the first part of 1990, the economy entered a recession in the latter part of the year. The jump in crude oil prices reduced spending on other products, and declining business and consumer confidence contributed to reduced spending at the end of the year.
- Interest rates were declining by the end of the year in response to a softer economy, lower underlying inflation, monetary policy easing, and the new budget law.

Chart 2-10 **The Employment Cost Index**

After being relatively flat from the second half of 1989, growth in wages and salaries, as well as total compensation, fell in the last three quarters of 1990.



Note: All private industry.

Source: Department of Labor.

- The budget deficit—as measured in the national income and product accounts—increased as a percent of GNP from 2.5 percent in fiscal 1989 to 2.9 percent in fiscal 1990. After adjusting for the cyclical weakness in the economy, the deficit declined slightly as a percent of GNP from fiscal 1989 to fiscal 1990.
- Housing and consumer spending were most affected by the slowdown. Stricter credit conditions also contributed to the slowdown.
- The overall inflation rate, as measured by the fixed-weighted price index for all goods produced in the economy, rose temporarily in the first quarter of 1990 but was below the 1989 average in each of the last three quarters of the year.

MONETARY AND FISCAL POLICY OUTLOOK

Monetary and fiscal policies exert a powerful influence on the economy and therefore can have profound effects on the prospects for achieving an early recovery from the current downturn and increasing long-term growth. The Administration strongly supports stable, credible policies that provide the flexibility to mitigate the downturn while maintaining a long-term focus on the goal of strong, noninflationary economic growth.

MONETARY POLICY

Monetary policy should be credible, systematic, and consistent with the goal of mitigating the downturn and allowing the economy to move toward a higher level of sustainable growth with a low and stable inflation rate. The Federal Reserve faces several challenges in implementing monetary policy in 1991.

In July 1990 the Federal Reserve set a preliminary target range of 2½- to 6½-percent growth for M2 during 1991, down half a percentage point from the 1990 range. This reduction is consistent with the longer term goal of gradually reducing the underlying rate of inflation. But with a weakening economy, it is essential that money growth stay well within this range. Changes in velocity that appear long-term may require the Federal Reserve to reconsider its preliminary target range. The target range for M3 is set at 1- to 5-percent growth, reflecting the expectation that M3 growth will continue to be affected by the ongoing restructuring of thrift institutions.

In formulating monetary policy, consideration must be given to the cyclical regularity that interest rates tend to fall as the demand for private credit falls in a weakening economy. This tendency is particularly important to recognize if the Federal funds rate continues to be the focus for short-run implementation of Federal Reserve policy, because a decline in interest rates during a downturn may not be a sign of monetary easing, particularly if the growth of money and credit has slowed. A restrictive monetary policy would jeopardize a solid recovery from the current slowdown and hamper prospects for long-run growth. By further reducing the discount rate and taking action to lower the Federal funds rate as money and credit growth slowed, inflationary pressures eased, and the downturn continued in early 1991, the Federal Reserve has taken action that will help mitigate the current recession.

Other challenges arise in the area of bank regulation. Through bank regulations and supervision, the Federal Reserve and other bank regulators have an important influence over lending activity. Regulators should continue prudent oversight of bank lending. It is important, however, that lending be available to creditworthy borrowers, and that regulators not be so stringent that sound banks cannot make sound loans to sound borrowers.

The restructuring of bank assets to meet the requirements of the Basle framework may present the Federal Reserve with additional policy challenges. In the longer term, the movement away from short-term, adjustable-rate loans (like commercial and industrial loans) to longer term, fixed-rate loans, such as many mortgages and mortgage-backed securities, may increase the exposure of banks to sudden swings in short-term interest rates. Since banks must offer competitive rates to attract funds, a quick rise in short-term interest rates would tend to raise their costs relative to their income. These possibilities would adversely affect economic growth. Bank regulators are currently studying ways to incorporate this interest rate risk into capital guidelines.

FISCAL POLICY

The new budget law, signed in November 1990, includes deficit-reduction guidelines and budget process reforms that will have substantial beneficial effects on the economy in 1991 and the years beyond. The budget law is expected to reduce the deficit by almost one-half trillion dollars over the next 5 years from what it otherwise would have been.

The Effects of Fiscal Policy

Fiscal policy comprises the spending, tax, and borrowing activities of the Federal Government. Earlier in this chapter, several different measures of the deficit were discussed. While changes in the deficit have important effects on the economy, the composition of the underlying expenditure and tax changes can have extremely important effects as well.

Increases in Federal purchases have the potential to boost demand and stimulate the economy temporarily, but eventually they put upward pressure on inflation and interest rates. That upward pressure will harm interest-sensitive activities in the economy such as investment and ultimately lower the economy's productive capacity. *When considering the composition of Federal spending, investments should be pursued that promote long-run growth, such as research and development and public infrastructure projects that pass stringent cost-benefit criteria.*

The size and structure of Federal taxes and transfers also have significant effects on the economy. High marginal tax rates have been shown to discourage work effort, saving, and investment. Thus, a guiding principle behind the landmark tax reforms of 1981 and 1986 was to lower tax rates significantly.

The effective tax rate, the rate actually paid on earnings or investment income, may differ from the more commonly quoted statutory tax rate. A prime example occurs in the case of capital gains. Consider a growth stock, purchased for $1,000 in 1970 and sold in 1990, that pays no dividends. Over this period the average annual inflation rate was 6 percent. Suppose that the stock had an average annual real return of 2 percent. In 1990, the stock would sell for $3,765.63 more than the purchase price. Tax payments would be 28 percent of this capital gain and would be collected when the asset is sold, rather than each year as the asset increases in value. This deferral of tax payments lowers the effective tax rate. A large portion of the increase in the value of the asset, however, is due to inflation and is not a real gain. In fact, the after-tax real return on the asset is only 0.73 percent, well below the pretax real return of 2 percent. The net effect of inflation and deferral leads to an effective tax rate of 63 percent on the real capital gain, much higher than the 28 percent statutory tax rate.

The effects of fiscal policy on the economy also depend crucially on expectations for future spending and taxes as well as on their current levels. The new budget law, for example, reduces the budget deficit from what otherwise would be expected. Economic theory and empirical evidence indicate that expectations of deficit reduction in future years, if the deficit reduction commitment is credible, can lower interest rates as financial market participants observe that the government will be lowering its future demand in the credit market. That can mitigate a potential short-run contractionary effect. In other words, expectations of lower interest rates in the future will lower long-term interest rates today. Lower long-term interest rates will reduce the cost of capital, stimulating investment and economic growth relative to what would be predicted if expectations were ignored.

Projected Deficit Reduction: 1991–95

Calculating how much the new budget law and its enforcement provisions, known as the Budget Enforcement Act, are expected to cut the deficit requires an estimate of the preexisting baseline deficit. The baseline is calculated from a simulation of future expenditure and revenue patterns that assumes no intervening policy changes. The calculation depends, for example, on economic assumptions about GNP growth and inflation, and demographic changes in the population. Any tax or spending changes that are already part of the law, such as cost-of-living increases for entitlement recipients, are incorporated in the baseline calculation. By calculating the deficit reduction against the preexisting baseline, the size of the reduction is measured relative to what the deficit would have been had no changes in the law occurred and the underlying baseline assumptions materialized.

Obviously, different economic assumptions will produce different baselines and also different future levels of the deficit. However, *different economic assumptions will have a relatively small effect on the estimated reduction in the deficit relative to the corresponding baselines.*

The majority of the budget law's deficit reduction comes from slowing the growth of expenditures. Discretionary spending, which is spending whose levels the Congress sets each year, is expected to account for roughly 40 percent of the reduction from the baseline.

Much of this total is expected to come from reductions in defense outlays.

Slowing the growth of entitlement and mandatory spending programs, which are statutory obligations such as medicare and agriculture programs, is expected to account for roughly 20 percent of the 5-year deficit reduction. The smaller deficit resulting from the combination of spending and tax changes, relative to the baseline, will also reduce interest payments on the debt by a significant amount over the next 5 years.

The new budget law raises almost $150 billion in additional tax revenue over the fiscal 1991–95 period. While marginal tax rates for the upper tail of the income distribution were reduced from 33 to 31 percent, marginal tax rates in the extreme upper tail increased from 28 to 31 percent. The affluent will pay higher taxes as a consequence of a new phaseout of personal exemptions, limitation of itemized deductions, and new excise taxes levied on selected luxury items, such as expensive furs, jewelry, and cars. About one-quarter of the total revenue increase comes from excise tax increases on gasoline, alcohol, and tobacco.

The new budget law also provides significantly more assistance to the working poor by adding about $18 billion to the earned income tax credit (EITC) over the next 5 years. The EITC is a refundable tax credit given to low-wage taxpayers with children.

Chart 2–11 shows the change in the projected NIPA and NIPA structural deficit for the next 5 years. The NIPA structural deficit is expected to decline in each of the next 5 years, as the provisions of the new budget law are fully implemented. In contrast, the NIPA deficit is expected to increase in 1991 as the automatic stabilizers cushion the effect of the downturn. After 1992 the NIPA deficit is also expected to fall steadily.

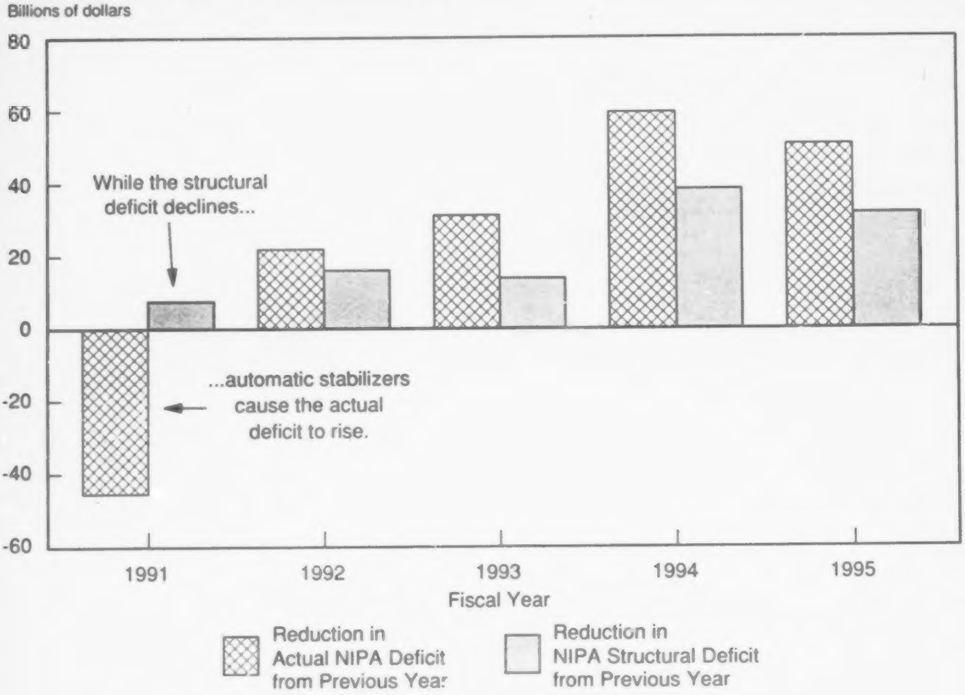
Budget Process Reform

By reforming the budget process the new budget law has improved the credibility and stability of fiscal policy. These reforms significantly increase the strength of the previous budget law and give fiscal policy a longer term focus. The new law defines two main types of spending: mandatory and discretionary. *Under the new law, mandatory spending and tax legislation is limited by a "pay-as-you-go" test.* Under this test any new mandatory spending legislation or proposed tax decreases for the next 5 years must be offset by a corresponding decrease in other mandatory spending or by an increase in tax revenue.

Legally binding caps have been established on discretionary spending for each of the next 5 years. For 1991 through 1993, caps are placed on three separate categories of discretionary spending: domestic, defense, and international. In 1994 and 1995, a single cap covers total discretionary spending. In each year the spending on

Chart 2-11 **Reductions in the Federal Budget Deficit, NIPA Basis**

With the new budget law, the structural deficit is expected to decrease in each of the next 5 years; the actual deficit is expected to rise before falling.



Source: Department of Commerce.

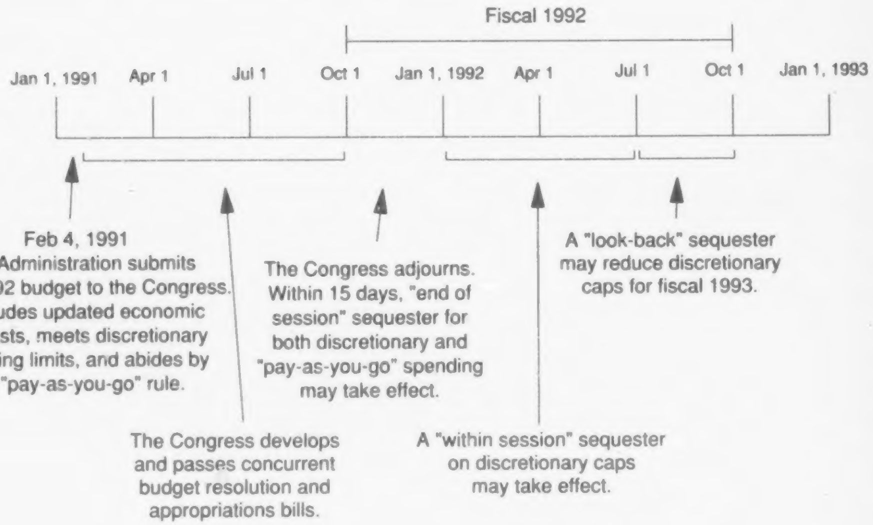
different programs within a category can change, but total spending for each category cannot exceed the cap. Hence, the caps impose a "flexible freeze" on spending. Moreover, saving in one category cannot be credited to another category. The discretionary caps will be adjusted for inflation and a limited set of technical factors. Funding for the military operation in the Persian Gulf will not count against the defense discretionary spending caps.

Discretionary spending that exceeds the caps, or mandatory spending or receipts legislation that violates the pay-as-you-go rule, will trigger sequesters, which are automatic, across-the-board cuts in discretionary or mandatory spending. "End-of-session" sequesters would take effect 15 days after the Congress adjourns at the end of the fiscal year. They apply to the category that violates the rule. If domestic discretionary spending violates its spending caps, for example, it is cut. If the pay-as-you-go rule is violated, entitlement spending is reduced. An end-of-session sequester has already taken place for the fiscal 1991 budget because new spending legislation, as a result of an unintentional drafting error, violated the spending cap on international discretionary programs.

A "within session" sequester can be applied to discretionary spending during the fiscal year if supplemental appropriations leg-

islation—appropriations made for the fiscal year, during the fiscal year—violate the discretionary spending caps before the last quarter of the fiscal year. If supplemental legislation violates these caps during the fourth quarter, a "look-back" sequester lowers the following year's caps by the amount of the overrun. An example of how the three types of sequesters would work in the fiscal 1992 budget cycle is given in Chart 2-12.

Chart 2-12 **The Fiscal 1992 Budget Cycle**



Feb 4, 1991
The Administration submits fiscal 1992 budget to the Congress. It includes updated economic forecasts, meets discretionary spending limits, and abides by the "pay-as-you-go" rule.

The Congress develops and passes concurrent budget resolution and appropriations bills.

The Congress adjourns. Within 15 days, "end of session" sequester for both discretionary and "pay-as-you-go" spending may take effect.

A "within session" sequester on discretionary caps may take effect.

A "look-back" sequester may reduce discretionary caps for fiscal 1993.

Sources: Council of Economic Advisers and Office of Management and Budget.

Under the new budget process, discretionary funding that the President designates as being required to meet an emergency and that the Congress designates as an emergency by statute, would not count against the discretionary caps. If the emergency funding affected mandatory spending, it would not be counted for pay-as-you-go purposes. Because the President now has the authority to require that all items meet the enforcement provisions, other than those the President designates an emergency, the Congress cannot avoid the discretionary caps or pay-as-you-go rule by passing emergency supplemental appropriations bills.

The budget law sets overall deficit targets for each year and allows the deficit targets to be adjusted in response to changes in short-run economic conditions in fiscal 1992 and 1993. If economic growth is lower than expected, the deficit target is raised. If economic growth is higher than expected, the deficit target is lowered. Adjusting for changing economic conditions preserves the "automatic stabilizers" built into spending programs and the tax code. When growth is low, entitlement spending increases and tax revenues fall, increasing the budget deficit but cushioning personal incomes and spending. The opposite happens when growth accelerates. In fiscal 1994 and 1995 the President can choose not to adjust the deficit targets.

Several additional reforms have been made in the budget process. Budget resolutions, which are used by the Congress to place spending limits on its committees, will now cover 5 fiscal years. That will make the long-term implications of budget legislation more apparent when members vote on the resolutions. Furthermore, the Social Security trust fund is now protected by "firewalls," procedural rules in both the House and Senate that make it difficult to pass any resolution that would reduce the actuarial balance of the fund.

Federal Credit Reform

Another important feature of the new budget law reforms the budgetary treatment of Federal credit programs. Government spending on credit activities is best measured by the subsidies embodied in Federal direct loans and loan guarantees. For years, the budget did not record these expenses, which reduced the scrutiny given to credit programs. The Federal Credit Reform Act of 1990, part of the 1990 budget law, requires that the subsidy cost of Federal credit be treated in the same manner as other Federal spending in the budget process.

Additional steps were taken to ensure the financial soundness of federally sponsored, privately funded businesses, called government-sponsored enterprises (GSEs). The contingent liabilities incurred by GSEs have risen dramatically. Both the Treasury Department and the Congressional Budget Office are required to submit studies on the financial soundness of these institutions. These studies will provide the background for legislation, to be introduced by September 15, 1991, that will ensure the fiscal health of GSEs (see Chapter 5 for more detail).

Budget Outlook for Fiscal 1991 and Fiscal 1992

The consolidated and NIPA deficits are expected to be higher in fiscal 1991 than they were in fiscal 1990. Automatic stabilizers are likely to add to the budget deficit in fiscal 1991, but they will help mitigate the downturn without altering the course of long-term structural deficit reductions. An increase in expected outlays of deposit insurance funds in fiscal 1991 also contributes to the higher projected consolidated budget deficit, but as described earlier, RTC and other deposit insurance outlays have a negligible net effect on capital markets. For fiscal 1991 the consolidated deficit is expected to be $318 billion, compared with $220 billion in fiscal 1990, with deposit insurance outlays projected to rise by $53 billion. On a NIPA basis, which excludes spending for deposit insurance, the deficit is expected to be $204 billion in fiscal 1991, compared with $158 billion in fiscal 1990.

For fiscal 1992 both the consolidated and NIPA deficits are projected to improve, compared with fiscal 1991. The consolidated deficit is expected to be $281 billion, and the NIPA deficit is expected to be $182 billion. Much of this improvement is due to a return to more normal growth projected for fiscal 1992.

The economic downturn followed by the projected upswing will obscure the tendency for the structural deficit to decline. The structural NIPA deficit is projected to fall by $7.5 billion in fiscal 1991 and then by an additional $16.2 billion in fiscal 1992.

SUMMARY

- The Administration supports stable, credible policies that provide the flexibility to mitigate the downturn while maintaining a long-term focus on the goal of strong economic growth and low and stable inflation.
- An important characteristic of a credible and systematic monetary policy is a commitment to sustain the rate of growth of money and credit during a downturn. That commitment would allow interest rates to decline and mitigate the downturn.
- The Omnibus Budget Reconciliation Act of 1990 is a substantial and credible deficit reduction agreement that is expected to reduce the deficit by almost one-half trillion dollars over the next 5 years and add to national saving and long-term growth.
- Because of the downturn, the automatic stabilizers are likely to add to the budget deficit in 1991, but they will help bring the economy to a quick recovery without altering the course of long-term structural deficit reductions.

THE ECONOMIC OUTLOOK

The Administration projects that the downturn in the economy is likely to continue into the early part of 1991 and that recovery is likely to begin by the middle of the year. After the recovery, the economy is then expected to return to a strong growth path of around 3 percent through the mid-1990s. In the long run, projected reductions in labor force growth may lead to lower real GNP growth, unless they are offset by increased immigration or greater labor force participation.

THE OUTLOOK FOR THE SHORT TERM

Reductions in real consumer income during the last two quarters of 1990, low levels of consumer and business confidence, and continued tight credit conditions all point to a further decline in real activity in the first quarter of this year.

There have been eight other recessions since World War II. The average recession lasted 11 months, two lasted 16 months, and one was only 6 months. The typical recession has been associated with a 2.6-percent decline in real GNP from peak to trough, although declines have been as high as 4.3 percent and as low as 1 percent.

Compared with the average of these previous recessions, the current downturn is likely to be shallow and relatively short, and the prospects for a recovery of economic growth by mid-1991 are good. The economy continues to have low inventories relative to sales, indicating that a prolonged period of inventory liquidation is not likely in the short term. More importantly, in the early stages of previous downturns both inflation and interest rates were either high or rising. In 1982, for example, the Federal Reserve had to follow a stringent monetary policy to reduce entrenched inflation expectations. In the current situation, the core inflation rate is moderating and is far lower than in the 1974–75 and 1981–82 recessions, partly because the Federal Reserve has followed a credible, systematic policy in recent years. Moderating inflation, coupled with Federal Reserve credibility in fighting inflation, leaves room for the Federal Reserve's policy to soften the downturn without raising expectations of higher inflation.

Additional developments in 1990 point to growth recovering in the second half of 1991. Lower long-term interest rates will begin to have positive effects on investment spending. The loosening of monetary policy that occurred in the fourth quarter of 1990 and early 1991 will also begin to affect consumer and business spending in the middle of 1991. Some analysts estimate that it takes at least five quarters for a change in the value of the dollar to have a substantial effect on exports and imports. Thus, the lagged effects on exports of the decline in the foreign exchange value of the dollar are likely to be felt well into 1991. In addition, real net exports are expected to improve because the Nation's major trading partners are expected, on average, to experience stronger growth than the United States.

A final important ingredient to recovery is a successful resolution to the Persian Gulf crisis. Oil prices have already declined substantially, which will remove a large drag on the economy. In addition, successful resolution of the crisis will strengthen the economy by boosting consumer and business confidence.

The Administration expects real GNP to increase 0.9 percent from the fourth quarter of 1990 to the fourth quarter of 1991 (Table 2–3).

This rate is higher than the 0.3-percent growth during 1990 because of the fourth-quarter decline in 1990. The sectors most likely to contribute to economic growth are those that are particularly sensitive to lower interest rates, easier credit conditions, and the lower dollar in 1990. For example, residential construction, consumer durables, and business spending on new plant and equipment are likely to improve as the year progresses. Exports of manufactured goods and farm commodities are likely to rise. A return to higher export growth for manufacturing would also stimulate further spending on new plant and equipment needed to meet the rising export demand.

TABLE 2-3.—*Economic Outlook for 1991*

Item	1990 [1]	1991 Forecast
	Percent change, fourth quarter to fourth quarter	
Real gross national product	0.3	0.9
Personal consumption expenditures	.2	.5
Nonresidential fixed investment	.9	1.6
Residential investment	−8.7	1.5
Federal purchases of goods and services	5.5	−3.9
State and local purchases of goods and services	2.5	1.8
GNP implicit price deflator	4.0	4.3
Consumer price index [2]	6.2	4.3
Compensation per hour [3]	−1.8	6.0
Output per hour [3]	−.1	1.6
	Fourth quarter level	
Unemployment rate (percent) [4]	5.8	6.6
Housing starts (millions of units, annual rate)	1.0	1.2

[1] Preliminary.

[2] For urban wage earners and clerical workers.

[3] Nonfarm business, all persons.

[4] Unemployed as percent of labor force including resident Armed Forces.

Note.—Based on seasonally adjusted data.

Sources: Council of Economic Advisers, Department of Commerce, Department of Labor, Department of the Treasury, and Office of Management and Budget.

Inflation in 1991 should be lower than in 1990, barring a resurgence of oil price rises or other price shocks. The economic slowdown in 1990 created excess capacity in many industries and eased tightness in labor markets, which will contribute to downward pressure on underlying inflation during the year.

In 1992, growth is expected to be robust as the economy continues to rebound from its sluggish growth in 1989–90 and the downturn that began in late 1990. Business investment and construction activity are expected to be especially strong. The unemployment rate is projected to decline.

Forecast Uncertainties

Economic forecasting is an imprecise science. Natural disasters and other unexpected developments can cause forecasts to go awry. Changes in the policies upon which the forecasts are based can cause actual events to be substantially different from the forecast.

Ultimately, economic forecasts are based largely on predictions about human behavior, usually taking the previous patterns of behavior as a guide. But human behavior is complex, difficult to predict, and subject to change. People do not always respond the same way, or with the same speed, in what appear to be similar circumstances.

Forecasts made around turning points of the business cycle are even less precise than those made during extended expansions. Moreover, the conflict in the Persian Gulf creates uncertainty about future oil price developments.

In the longer term, another important area of uncertainty arises from the possibility of rising protectionism and increasing trade frictions between countries. If the Uruguay Round of the General Agreement on Tariffs and Trade is not completed successfully, countries may begin to close their markets to protect their domestic industries. That would increase the risk of slower long-term growth for all countries. In addition, an increase in the barriers to trade would lead to a decrease in U.S. exports, which have been a key source of growth for the economy over the last few years. The downturn facing the United States and other countries around the world jeopardizes more open trading, because governments and workers typically seek to maintain domestic employment levels by reducing imports during downturns. (Chapter 7 discusses the role open foreign markets play in economic growth.)

Table 2-4 illustrates the uncertainties of economic forecasting by providing a range of short-term outcomes. The higher growth alternative is consistent with a sharper and faster rebound in economic activity than the Administration projection. The lower growth alternative is consistent with the behavior of real growth during an average postwar recession.

Since real growth, inflation, interest rates, and employment affect Federal spending and receipts, the projected budget deficit also varies across the three projections. A slow recovery with relatively high unemployment, low income growth, and higher interest rates will lower tax receipts and increase spending through automatic stabilizers, leading to a higher deficit. On the other hand, a faster, more robust acceleration in income and employment growth could substantially cut the deficit from the Administration projection.

THE PROSPECTS FOR GROWTH IN THE LONGER TERM

Short-term projections are heavily influenced by recent events. Developments that temporarily raise or lower the overall level of demand can have a substantial effect on the near-term outlook for real growth and inflation. In the longer term the main determi-

TABLE 2-4.—*Alternative Projections and Their Impact on the Deficit, 1991-92*

Item	Calendar year 1991	Calendar year 1992
	Percent change, fourth quarter to fourth quarter	
Real gross national product:		
Higher growth	1.3	3.8
Administration	.9	3.6
Lower growth	−1.3	3.5
GNP implicit price deflator:		
Higher growth	4.5	4.2
Administration	4.3	3.8
Lower growth	4.1	3.6
	Percent	
Total unemployment rate:		
Higher growth	6.5	6.4
Administration	6.7	6.6
Lower Growth	7.1	6.9
Interest rate, 91-day Treasury bills:		
Higher growth	6.7	6.6
Administration	6.4	6.0
Lower growth	6.2	5.7
	Billions of dollars (Fiscal years)	
Budget deficit:		
Higher growth	204	186
Administration	207	193
Lower growth	222	225

Note.—Deficit on a consolidated basis excluding deposit insurance outlays.

Sources: Council of Economic Advisers, Department of the Treasury, and Office of Management and Budget.

nants of average growth are the factors that influence the overall supply of goods and services generated in the economy.

One way to focus on supply factors is to decompose real GNP growth into four components: (1) labor force growth, the growth in the number of people available for work each year; (2) the change in the share of the labor force that is employed, or the employment rate; (3) the growth in the number of hours an employed person works each year, represented as the growth in average weekly hours; and (4) labor productivity growth, the growth in the amount of goods and services that can be produced with an hour of labor. Table 2-5 shows the contribution of various factors in expected average real GNP growth during the next 6 years, compared with previous periods.

Growth During the Next 6 Years

Economic growth is projected to average about 2.6 percent a year during the next 6 years (see Table 2-6 for year-by-year projections). This projection assumes an average rise of 1.3 percent a year in the labor force, a lower growth rate than in the 1980s. Slower labor force growth results both from slight reductions in projected labor

TABLE 2-5.—*Accounting for Growth in Real GNP, 1948-96*

[Average annual percent change]

Item	1948 IV to 1981 III	1973 IV to 1981 III	1981 III to 1990 III	1990 III to 1996 IV
GROWTH IN:				
1) Civilian noninstitutional population aged 16 and over	1.5	1.8	1.1	0.9
2) PLUS: Civilian labor force participation rate	.2	.5	.4	.4
3) EQUALS: Civilian labor force	1.8	2.4	1.6	1.3
4) PLUS: Civilian employment rate	−.1	−.4	.2	.1
5) EQUALS: Civilian employment	1.7	2.0	1.8	1.4
6) PLUS: Nonfarm business employment as a share of civilian employment [1]	.1	.1	.3	−.3
7) EQUALS: Nonfarm business employment	1.8	2.1	2.1	1.1
8) PLUS: Average weekly hours (nonfarm business)	−.4	−.7	.0	−.1
9) EQUALS: Hours of all persons (nonfarm business)	1.3	1.3	2.1	1.0
10) PLUS: Output per hour (productivity, nonfarm business)	2.0	.7	1.0	1.8
11) EQUALS: Nonfarm business output	3.3	2.0	3.1	2.8
12) LESS: Nonfarm business output as a share of real GNP [2]	.0	−.1	.4	.2
13) EQUALS: Real GNP	3.3	2.2	2.8	2.6

[1] Line six translates the civilian employment growth rate into the nonfarm business employment growth rate.

[2] Line 13 translates nonfarm business output back into output for all sectors, or GNP, which includes the output of farms and general government.

Note.—Data may not add due to rounding.

Time periods for the first two columns are from business cycle peak to business cycle peak to avoid cyclical effects.

Sources: Council of Economic Advisers, Department of Commerce, Department of Labor, Department of the Treasury, and Office of Management and Budget.

force participation rates and from slower growth in the working-age population. In the postwar period, growth in the working-age population averaged 1.5 percent, but it is predicted to rise at only a 0.9-percent rate over the next 6 years. Labor force participation and population growth projections also depend on factors such as immigration. The labor force growth projections assume lower levels of immigration than in the 1980s. However, the Immigration Act of 1990, which allows a substantial increase in immigration and emphasizes skill-based entry criteria, may increase the size of the labor force, which would lead to faster labor force growth than reflected in Table 2-6. It could also increase productivity.

Decreases in the unemployment rate are expected to contribute less than 0.1 percentage point on average, each year to real GNP growth from 1991 to 1996. A fall in the unemployment rate in the 1991-92 period, as the economy rebounds from the current slowdown, contributes the most to GNP. As the economy nears full employment, increases in employment make smaller contributions to growth.

Average weekly hours are expected to decline slightly and to have little effect on average real GNP growth during 1991-96. In 1991 and 1992, hours seem likely to recover somewhat from their cyclically low levels in 1990. In the latter part of the period the long-term downward trend in average weekly hours is expected to reassert itself.

TABLE 2-6.—*Administration Economic Assumptions, 1991-96*

Item	1990 [1]	1991	1992	1993	1994	1995	1996
	Percent change, fourth quarter to fourth quarter						
Real GNP	0.3	0.9	3.6	3.4	3.2	3.0	3.0
Real compensation per hour [2]	−1.8	1.6	2.0	2.1	2.0	2.0	2.0
Output per hour [2]	−.1	1.6	1.9	1.9	1.9	1.9	1.9
Consumer price index [3]	6.2	4.3	3.9	3.6	3.5	3.4	3.3
	Annual level						
Interest rate, 91-day Treasury bills (percent) [4]	7.5	6.4	6.0	5.8	5.6	5.4	5.3
Employment (millions) [5]	119.6	119.0	120.8	122.9	125.1	127.3	129.2
Unemployment rate (percent) [6]	5.4	6.7	6.6	6.2	5.8	5.4	5.1

[1] Preliminary.
[2] Nonfarm business, all persons.
[3] For urban wage earners and clerical workers.
[4] Average rate on new issues within period, on a bank discount basis.
[5] Includes resident Armed Forces.
[6] Unemployed as percent of labor force including resident Armed Forces.

Sources: Council of Economic Advisers, Department of Commerce, Department of Labor, Department of the Treasury, and Office of Management and Budget.

A key assumption underlying the average 2.6-percent growth rate is that labor productivity will average 1.8 percent over the forecast horizon. After 1991, assuming the Administration's pro-growth initiatives are adopted, underlying economic growth is expected to approach 3 percent and labor productivity is projected to be 1.9 percent. That is very close to the 1.7-percent average rate of productivity growth since 1950. It is below the 2.4-percent rise from 1950 to 1969, but higher than average productivity growth in the 1980s. This rise in labor productivity will be facilitated by the higher level of capital accumulation that results from lower Federal borrowing and lower real interest rates.

Inflation and interest rate projections are consistent with the longer term assumptions concerning monetary and fiscal policy. These projections reflect a monetary policy aimed at gradually reducing the underlying inflation rate over the next 6 years. In response to lower inflation and reduced Federal borrowing requirements, interest rates, both nominal and real, are likely to decline.

Growth Beyond the Mid-1990s

For the years beyond the mid-1990s, demographic factors suggest that the average rate of real GNP growth will slow. Labor force growth, for example, is expected to decline substantially throughout the next 40 years. Since 1948 the labor force has grown by 1.7 percent a year. However, from 1990 to 2010 labor force growth is projected to average about 0.9 percent a year and is projected to *decline* 0.2 percent a year from 2010 to 2030. That is consistent with a projected slowdown in population growth and a projected decline in the overall labor force participation rate.

Population growth (the Census Bureau middle projection) is projected to average just under 0.5 percent a year from 1990 to 2030, less than half the rate of annual average population growth between 1960 and 1990. The overall labor force participation rate is projected to rise through about 2000, the last year the baby-boom generation is entirely within the range of working ages that have traditionally had the highest participation rates. As the population ages, the overall participation rate would decline even without a fall in the participation rate of any single demographic group. Overall labor force participation is projected to show little net growth between 1990 and 2010 and to decline after 2010.

The projection of slowing real GNP growth over the very long term rests upon demographic projections that are largely extrapolations of current and past population growth and labor force behavior. Several factors would cause the simple extrapolations to understate the average rate of economic growth: an unexpected increase in fertility rates; an increase in labor force participation rates for older Americans, perhaps due to increasing longevity; or an increased number of highly skilled immigrants. Nevertheless, the simple extrapolations provide a benchmark against which long-term growth projections can be compared.

It is also important to note that although real GNP growth is likely to decline over the next 40 years, this does not suggest that productivity growth will decline. With real output per hour rising at 1.9 percent a year, the standard of living would more than double by 2030. Sound policies that create incentives for saving and investment and a better educated work force will help to ensure the maximum sustainable rise in the standard of living.

SUMMARY

- The downturn that began in the second half of 1990 is expected to continue into early 1991, with the economy recovering by mid-1991. While future oil prices remain uncertain, oil prices in the range they reached following the successful beginning of Operation Desert Storm will reduce the drag on the economy caused by the oil shock in the latter half of 1990.
- Economic activity will be further strengthened by lower interest rates and the decline in the value of the dollar that occurred in 1990. Inflation is projected to moderate, barring an unexpected rise in oil prices above their late 1990 levels.
- In the longer term, several factors have paved the way for increased private capital accumulation and faster productivity growth. The economy's underlying medium-term growth potential is likely to be about 3 percent a year. Inflation and nominal interest rates are projected to decline.

- **In the very long term, the average rate of real GNP growth is likely to fall, due to a slower growing labor force. If productivity growth holds up, living standards will continue to increase.**

CONCLUSION

The economy, which was already growing sluggishly for various reasons, entered a recession in the latter part of 1990. The downturn was caused in large part by the economic effects of the oil shock following Iraq's invasion of Kuwait.

Recovery is likely to begin by mid-1991, making the downturn relatively mild. In contrast to other slowdowns, the economy entered this recession with low inventories, thereby decreasing the likelihood of substantial further cuts in production. Unlike previous postwar recessions when inflation was rising, in the current situation core inflation is relatively low and money growth has been slow, thus there is room for flexibility in Federal Reserve policy to mitigate the downturn without raising inflation expectations. Declines in the exchange value of the dollar in 1990 and the monetary policy easing that occurred at the end of 1990 and early 1991 will also help to increase growth in 1991.

Over the longer term, the new multiyear, enforceable budget law will lower the structural Federal deficit and, therefore, Federal borrowing requirements. Combined with a monetary policy aimed at maintaining strong economic growth while gradually reducing the underlying inflation rate, both nominal and real interest rates are likely to decline. Credible monetary policy and growth-oriented fiscal policy will facilitate higher levels of capital accumulation, raise labor productivity, and enhance the economy's growth potential.

CHAPTER 3

Oil Price Shocks and Economic Policy

IN THE SECOND HALF OF 1990, the world economy was hit with a sudden oil price increase reminiscent of the 1970s. From an average of about $17 a barrel in June 1990, the price of oil rose to an average of $36 in October, before declining in November and December and again in January 1991. This oil price shock was triggered by the Iraqi invasion of Kuwait, and the U.S.-led response to this act of aggression averted an even larger and longer lasting oil price shock.

Because oil is used widely, large and abrupt increases in its price have significant implications for the world economy and for both macroeconomic policy—fiscal and monetary policy—and policies concerned with energy and other markets. During 1989 the United States and the other major industrialized market economies used about 37 million barrels of oil products each day. Other countries, including less developed countries, consumed an additional 28 million barrels of these products. In the United States, uncertainty about oil prices and the resolution of the Persian Gulf situation contributed to the erosion of consumer and business confidence evident at the end of 1990. It is widely expected that as the situation is resolved, confidence will rise and oil prices will stabilize in a range not far from that prevailing before the price shock began. But even then considerable uncertainty about future oil prices is likely to remain.

Perceptions about the effects of oil price shocks on the U.S. economy reflect, in large part, the extremely high inflation and unemployment rates recorded at the time of the oil price shocks of 1973–74 and 1979–81. At the time of the first oil price shock, the inflation rate, as measured by the consumer price index, soared to 12.3 percent in 1974, followed by a rise of the unemployment rate to a postwar record high of 9 percent in May 1975. Similar adverse effects occurred at the time of the second oil price shock. Inflation rose to 13.3 percent in 1979, and the unemployment rate eventually reached 10.8 percent, a new postwar high, in November 1982.

Although the recent oil price shock increased inflation and unemployment, there is no reason to believe that the deterioration of economic performance will be as large or as long lasting as the experience of the 1970s might suggest. Not only does it now appear that this shock will be less severe, but the U.S. economy is now better able to adjust to any given change in oil prices. Compared with the 1970s, more systematic macroeconomic policies have kept the underlying rate of inflation relatively low and relatively stable in recent years. The resulting credibility that inflation will be contained enables monetary policy to respond to the recent shock without causing a prolonged recession or a permanent increase in inflation. In addition, a policy of deregulation has increased the flexibility of energy and other markets to respond to price shocks, and the amount of oil used has decreased relative to the size of the economy.

With the benefit of hindsight, it is clear that misguided macroeconomic policies in the period preceding the previous oil price shocks brought on high and rising underlying inflation. That made it unlikely that a more expansionary monetary policy would have been able to reduce the ensuing output declines without producing unduly large increases in prices. It is just as clear that misguided energy policies, both those in place when the shocks hit and those instituted afterward, significantly reduced the economy's flexibility and thus its ability to temper the effects of the shocks. It was regulation, and not events in the Middle East, that forced U.S. consumers to wait in long lines to buy gasoline. Historical experience, along with economic research on the oil price shocks of the 1970s, has taught us much about designing macroeconomic and energy policies for a world subject to such shocks. *Given the prospect of continuing uncertainty regarding future oil prices, it is essential that our policies correctly reflect the meaning and importance of energy security, let markets work to balance the forces of supply and demand, and set out a credible long-term course for the future.*

SIZE AND DURATION OF OIL PRICE SHOCKS

Most price changes merit little attention from policymakers. Indeed, prices that adjust continually to reflect changing conditions are a sign of a healthy, flexible economy. A price shock, on the other hand, is a large and unexpected change in the price of a commodity that can affect the economy as a whole. The most important price shocks to the U.S. economy during the past two decades have been changes in the price of oil. Because oil is consumed in significant amounts and is used intensively in the production of other goods, and because the United States imports a large amount of oil, oil price shocks can have large economy-wide repercussions.

RECENT OIL PRICE MOVEMENTS

The recent increase in oil prices began in July 1990, when the members of the Organization of Petroleum Exporting Countries

(OPEC) began negotiations to reduce their supply of oil to the world market. The spot market price, the price at which crude oil for near-term delivery is bought and sold, rose from an average of about $17 a barrel in June 1990 to almost $21 at the end of July.

After Iraq invaded Kuwait on August 2, the spot price rose quickly, reaching about $28 a barrel on August 6. The spot price went as high as $40 a barrel in mid-October and then generally declined through the end of 1990. Soon after the start of Operation Desert Storm in mid-January 1991, the spot price fell to about $20 a barrel, not far from its level just before Iraq invaded Kuwait.

Soon after Iraq's invasion, uncertainty concerning the timing of the resolution of the Gulf crisis increased uncertainty about future oil supplies, which in turn increased the precautionary demand for oil inventories. *Several countries began to increase their oil production in August, and by November these additional supplies had completely offset the loss of 4.3 million barrels in daily exports from Iraq and Kuwait.* However, these production increases left less standby crude supply and unused refining capacity to meet future contingencies. Changes in the spot price of oil reflect uncertainty about future supply conditions. However, the price of oil expected to prevail further in the future has changed relatively little since the oil price shock began; the price of oil to be delivered near the end of 1991 has typically differed by less than $4 a barrel from its pre-invasion level.

It is clear that the proximate cause of the rapid oil price increase late in the summer of 1990 was Iraq's invasion of Kuwait and its threat to Saudi Arabia. Had Iraq dominated both Kuwait and Saudi Arabia, it would have controlled almost one-half of the world's proven oil reserves. The international community responded to this aggression vigorously, deploying multinational forces and initiating an embargo against Iraq. *These responses to the Iraqi threats to both peace and economic security have averted even sharper and longer lasting increases in the price of oil and a greater deterioration of economic conditions.*

COMPARISON WITH PREVIOUS SHOCKS

The oil price shock that began in 1990 differs significantly from the price shocks of the 1970s in several respects. Before the sharp 1973–74 increases, oil prices had fallen for several decades relative to the prices of nonenergy goods and coal. That decline in real oil prices encouraged greater oil use and discouraged further exploration and investment in oil production.

By the early 1970s the rapidly growing oil demand brought on by robust growth of the world economy led to an increasingly tight world oil market. OPEC began to engineer a series of large price increases, eventually tripling the world price of oil from 1973 to

1974. Oil prices remained relatively stable until 1979, when the second price shock, often associated with the Iranian revolution and the outbreak of the Iran-Iraq war, began. By the end of 1981 oil prices had more than doubled.

Both of the earlier shocks followed several years of stable or slowly falling oil prices. In contrast, oil prices were highly volatile before the recent oil shock. In the first half of 1986 oil prices *fell* dramatically, plummeting by more than 50 percent to about $12 a barrel in July 1986. Between 1987 and 1989 oil prices fluctuated within the $13 to $22 range. During 1990 oil prices fell from a high of over $23 in early January to a low of less than $16 in late June. Since the recent shock began in July, world oil prices have continued to be far more volatile than they were in the initial stages of earlier shocks.

Another difference is the duration of the shocks. In both of the earlier oil shock periods, oil prices increased steeply and fairly steadily over a period of more than 2 years. In the recent episode, oil prices rose substantially through mid-October, generally fell through the end of 1990, and declined sharply after the successful start of Operation Desert Storm in mid-January 1991.

SUMMARY

- Price shocks are large and unexpected changes in the price of a particular commodity important to the economy as a whole. Oil price shocks are the most common and most significant price shocks.
- The recent price shock differs significantly from the oil price shocks of the 1970s. In addition to being less severe, it followed a period of volatile prices in contrast to the period of relatively stable prices that preceded each of the earlier shocks.

THE EFFECTS OF OIL PRICE SHOCKS

The effect of a shock on the performance of the economy depends on many factors. In addition to the macroeconomic and energy policies pursued before and during an oil price shock, the underlying structure of the economy determines how it is affected by a shock of a given magnitude and duration. In this section the effects are discussed in the context of policies that do not change in response to shocks, and, in particular, of a monetary policy that does not adjust money and credit growth.

EFFECTS ON INFLATION

Since oil products are used both directly and as inputs to the production of other goods and services, increases in oil prices directly and indirectly raise the overall price level unless rapid offsetting *wage and price declines occur elsewhere in the economy.* Higher prices for oil immediately raise the price of gasoline, heating oil, and other petroleum products and thereby directly affect the general price level (Box 3-1). The larger the share of expenditures devoted to petroleum products, the larger the direct contribution of oil price shocks to inflation. Indirect effects arise because prices for goods and services often reflect the costs of oil used in their production or distribution. The more oil intensive the economy's production processes, the larger the indirect contribution of oil price shocks to inflation.

Box 3-1.—Why Did Gasoline Prices Rise So Fast?

Gasoline prices at the pump started to rise almost immediately after Iraq's invasion of Kuwait shook the world oil market. It takes an average of about 6 weeks from the time oil enters domestic refineries for gasoline to reach the local pump. Why, then, did the price of gasoline rise so quickly?

Retailers, wholesalers, and refiners recognized that gasoline on hand at the time of a crude oil price increase would have to be replaced by gasoline produced from higher cost crude. The opportunity, or replacement, cost of the gasoline, rather than its acquisition or production cost, determines the market value of stocks on hand.

Gasoline suppliers who were able to buy low in July and sell high in August were in the same fortunate position as home sellers during a real estate boom, who are often able to sell their homes for large gains after holding them for short periods. In both the housing and gasoline markets, the logic of opportunity costs works in both directions. As crude oil prices fall, retail suppliers will be driven to lower gasoline prices, just as people who purchase houses at the peak of a real estate boom may be faced with the prospect of selling at a market value below their purchase price.

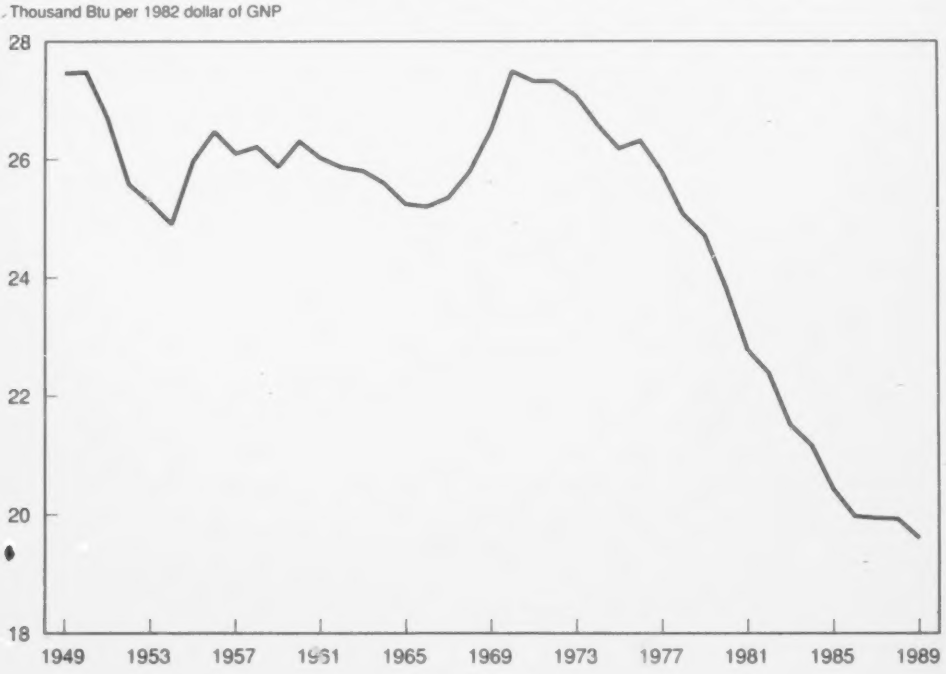
By raising the overall level of prices, an oil shock may eventually also lead to a higher level of nominal wages. That in turn may lead to further price increases, which would amplify the increase in the aggregate price level caused by the oil shock. The United States is fortunate that its wage-setting arrangements do not rapidly transmit the higher inflation caused by an oil price shock into excessive increases in wages and salaries. Some have suggested that the centralized bargaining more commonly used in many European economies to set wages allows such an excessive reaction of wages to higher prices, even when there have been no compensating productivity gains. The more gradual wage adjustments characteristic of the relatively decentralized labor markets in the United States tend to raise labor costs less when oil price shocks take place.

It is important to distinguish between continuing inflation and a once-and-for-all increase in the price level. An increase in oil prices raises overall prices to a higher level, producing a bout of *temporarily* higher inflation while prices are moving toward this higher level. As prices finish adjusting to the oil price shock, however, this component of inflation disappears. The inflation rate then reverts toward the underlying rate of inflation, which depends on the long-run growth rate of money and credit and of the economy's productive capacity.

Oil intensity and, more generally, energy intensity are important indicators of the sensitivity of the general price level to an oil price shock: the greater the intensity, the greater the effect of a price shock on the general price level. The energy intensity of the U.S. economy, measured as the ratio of primary energy use to real national output, decreased by more than 28 percent between 1972 and 1989 (Chart 3-1). At the same time, the share of oil in total energy use fell from 46 percent to 42 percent, with an even larger decline, from 30 percent to 21 percent, outside the transportation sector.

Chart 3-1 **Energy Consumption per Dollar of GNP**

Energy intensity in the United States has fallen substantially since the 1973-74 oil price shock.



Source: Department of Energy.

The trend toward lower energy intensity in the United States, which mirrors a similar trend in other major industrialized countries, reflects two forces. First, the efficiency of residential, commercial, industrial, and transportation energy use has improved significantly since 1973. For example, the average energy intensity of steel production fell by 20 percent between 1973 and 1987, and the amount of energy used to heat 1 square foot of residential space declined by 30 percent. Many of these adjustments reflect a market economy's response to higher relative prices of oil after the price shocks of 1973–74 and 1979–81. At the same time, the mix of outputs in the economy as a whole has shifted away from energy-intensive heavy industrial products, such as steel, toward less energy-intensive products and services.

Energy and oil intensity in the United States is somewhat higher than in several other large industrialized nations. In addition, oil products are more highly taxed in these countries, so that any given dollar increase in crude oil prices will produce a smaller percentage increase in the prices of gasoline and other oil products than in the United States. These differences suggest that oil price shocks will have a larger effect on inflation in the United States than in these other countries.

EFFECTS ON REAL GROWTH

The major macroeconomic effects of an oil price shock stem from reduced demand for goods and services by consumers and businesses. This decline in real spending will lead to temporarily slower growth of real gross national product (GNP) and employment. The reduction in output may be large enough to cause a recession, especially if the oil price shock occurs in a weak economy. However, even if oil prices were to remain high, these demand effects are temporary, and eventually the economy would return to its long-run growth path.

Terms-of-Trade Effects

Higher world oil prices mean that consumers must pay more to foreign suppliers for each barrel of imported oil, leaving them less to spend on goods produced in the United States. Consumers who use relatively more oil to heat homes in colder climates, for example, or to commute longer distances, will be relatively more affected by oil price increases. Hence, consumer spending is likely to fall off more in regions of the country that use relatively more oil. Spending in oil-producing regions in the United States, on the other hand, might rise as incomes increase, especially if higher oil prices lead to more exploration and increased drilling. On balance, however, the overall effect on the economy is to reduce consumer spending.

The increase in the relative price of imports affects the *terms-of-trade*; that is, the terms at which U.S. goods are traded for imports. At current U.S. oil-import levels of more than 7 million barrels daily, each $10 increase in the per-barrel price of oil would, if it persisted for a year, shift about $26 billion from the United States to foreign suppliers of oil. As a result of this increased expenditure for imported oil, the Nation's trade deficit is likely to rise.

Money and Credit Market Effects

Another important channel through which demand is reduced is through the higher overall price level generated by the oil price shock. The higher price level results in reduced *real* supplies of money and credit—nominal money or credit deflated by the price level—unless nominal supplies are raised proportionately. Lower real supplies of money and credit cause a tightening in credit markets and thereby raise interest rates above what they would otherwise be. Empirical analysis indicates that the adverse effect on output and unemployment of an oil price shock that stems from the decline in the real volume of money and credit is quantitatively significant.

Of course, this credit tightening effect does not take place in the absence of other factors that might affect interest rates. In the second half of 1990, for example, the weakening economy and the new budget legislation started interest rates on a downward trajectory. But, in general, *lower real money and credit growth rates that result from an oil shock would tend to keep interest rates higher than they otherwise would be.*

Higher interest rates reduce household spending on consumer durables like automobiles and furniture, which are often purchased on credit. The tightened money and credit market conditions are also likely to lead to reduced business investment spending for equipment, factories, and inventories. Residential construction may also be adversely affected by the rise in interest rates.

It is important to emphasize that both short- and long-term interest rates affect spending. Long-term interest rates are importantly affected by expectations about future short-term interest rates. The shorter and milder an oil price shock is expected to be, the less expectations about future short-term interest rates would be likely to change. Consequently, long-term interest rates would also be expected to change less. Thus, spending that depends on long-term interest rates would not be affected as much by a price shock that is expected to be shorter and milder.

Confidence Effects

Survey measures of consumer and business confidence dropped dramatically when the recent oil price shock began. That decline may have reflected not only lowered expectations of upcoming economic performance, but also *uncertainty* about oil prices, about economic conditions generally, and about prospects for war. Such a loss of confidence typically leads consumers to postpone purchases of big-ticket items such as new homes, furniture, automobiles, and other consumer durables. Heightened uncertainty also induces businesses to postpone investment in plant, equipment, and inventories.

The decline in consumer and business confidence in the second half of 1990 may have reflected the perception that the oil price shocks of the 1970s were primarily responsible for the substantial increases in inflation and unemployment rates that ensued. Although the oil price shocks of the 1970s did raise inflation and unemployment rates, the misguided macroeconomic policies carried out around the time of the shocks contributed significantly to those increases. Consumers and businesses therefore may have overestimated the likely adverse economic effects of the recent oil price shock.

Overall Demand Effects

The terms-of-trade, credit tightening, and confidence effects will reverberate through the economy. Slower consumer spending will lead to a larger cumulative effect on economy-wide spending and income, as growth of output and employment, and thus of income, slow in response to the initial slowdown in spending. If the oil price shock is transitory, as expected, this process will be reversed when prices fall.

Structural changes and reforms since the 1970s have made both energy and other markets more flexible and therefore better able to respond to changes in energy prices. In addition, the decline in oil intensity means that each dollar increase in the price of oil puts less upward pressure on costs and therefore on prices. Since the smaller increase in the price level reduces the real supplies of money and credit by a smaller amount, there is less upward pressure on interest rates. And smaller interest rate increases, in turn, mean that spending declines less. For the same reason, countries that have lower oil intensity may experience smaller interest rate increases and spending declines than countries with greater oil intensities. In addition, the now-deregulated energy markets in the United States allow the economy to adjust more flexibly and rapidly to oil price increases, as do energy futures markets, which are discussed below.

Effects on Productive Capacity

An oil price shock may temporarily reduce the economy's capacity to supply goods and services until producers' plant and equipment and workers' skills realign to higher oil prices. The amount by which capacity is curtailed is influenced significantly by the flexibility and responsiveness of markets. Shifts in the demand for various goods and services as a result of an oil price increase alter the demand for workers in regions and industries that produce these goods and services. Job relocation involves costs and takes time. During the transition, some additional unemployment may result.

After an oil price increase, production processes are likely to be too reliant on oil and energy. Depending on how long businesses expect a new, higher level of the relative price of oil to remain in effect, they may switch to production processes that use less energy. They may also produce fewer energy-intensive goods and services, sales of which will decline when higher energy costs are passed on to consumers. Thus, it would be reasonable to expect a shift of plant and equipment and workers' skills away from oil-intensive transportation and the sectors that rely heavily on transportation and toward less oil-intensive sectors. *An oil price shock that is expected to be short-lived would not require substantial adjustments of this kind, and associated frictional losses may be minimal.*

ESTIMATES OF THE EFFECTS

Economists generally agree that output and inflation respond to oil price shocks as described above. However, there is more disagreement and uncertainty about the size of the effects. By examining a number of econometric models, which reflect the experience with previous oil shocks, quantitative ranges for the effects that reflect this uncertainty can be developed. The ranges of magnitudes reported here are based on a variety of models and reflect some, but not all, of the structural and expectations effects discussed above.

For example, the analysis does not explicitly take into account the economy's reduced energy intensity since the 1970s. Most models based on historical data reflect the past, including past energy intensity, and are thus quite likely to overestimate the effects of oil price shocks on today's economy. In addition, reduced regulation, particularly of the energy sector, now permits the economy to respond more freely to changing oil prices. Thus, historical relationships may somewhat overstate the impact that an oil price shock would have today. Another factor that the analysis has not explicitly allowed for is the decline in consumer and business confidence that may result from an oil price shock, a factor that has been important in the second half of 1990.

A factor that the analysis does endeavor to incorporate is that both consumers and businesses base their actions on expectations of the future, sometimes by using data from futures markets. This forward-looking behavior allows a quicker adjustment of output and prices to changing economic conditions. Moreover, long-term interest rates may change in *anticipation* of upcoming conditions, rather than lagging behind them. Of the econometric models examined, those that incorporate forward-looking behavior suggest that output growth is likely to be curtailed less than other models predict. This difference in models is reflected in the ranges.

Consider, for example, the effects on the U.S. economy of an increase in the price of oil of 50 percent from a level of $20 that lasts for four quarters before returning to pre-shock levels. Smaller or shorter oil price shocks will have commensurately smaller effects, while larger shocks will have more serious consequences.

Impact on Output

Following the onset of an oil price shock, output growth would be expected to slow as the factors described above suppress real demand growth. The diversion of more income to pay for imported oil reduces real consumer spending on U.S. goods and services. In addition, the higher price level reduces the real supplies of money and credit, thereby raising interest rates and reducing credit-sensitive expenditures compared with what they would otherwise be. The spending declines and subsequent repercussions resulting from the four-quarter, 50-percent oil price shock would be expected to reduce real GNP growth by about 1 percentage point to 1½ percentage points on average over the four quarters that follow the onset of the shock. The decline in real output is also likely to slow employment growth. The unemployment rate would be expected to rise by an average of about one-half of 1 percentage point over the same four-quarter period. In the year following the beginning of the shock, higher imported oil prices would raise the trade deficit by about $15 billion to $25 billion.

There is less certainty about the quarter-by-quarter pattern of the effects on the economy than about the sizes of the four-quarter effects reported above. The output declines are likely to be largest in the quarters immediately following the onset of an oil price shock. The effects of the oil shock on real GNP growth are expected to diminish as time passes, however. As the frictions associated with a shock dissipate, the economy would be expected to resume growth along its longer run growth path. And as it recovers toward that path, the economy is forecast to grow *faster* than it would otherwise. *Thus, after having its real growth initially suppressed, the economy rebounds.*

Impact on Inflation

Such an oil price shock would also be expected to raise inflation, but, as with the output effects, the change is *temporary*. As measured by the consumer price index, the inflation rate is forecast to exceed what it would have been otherwise by about 1¼ percentage points to 2½ percentage points over the four quarters following the onset of the shock. The GNP implicit price deflator measures the prices of all the goods and services produced by the Nation. Inflation as measured by the GNP deflator would be less affected because petroleum products constitute a larger share of household expenditures than of total national production. This illustrates the point that the effects on prices, and on the economy generally, are related to oil intensity. The GNP deflator in the four quarters following the onset of the shock could be expected to be about three-fourths of 1 percentage point to 1½ percentage points higher than it would have been otherwise.

The temporarily higher inflation rate would be expected to reach its peak in the quarter after the shock begins, and would taper off thereafter. Though inflation is raised *on average* during the four quarters following the beginning of the shock, much of the increase takes place in the first two quarters. By the fourth quarter, inflation would likely revert to near its underlying rate.

To the extent that oil prices fall, the mirror image of these processes would be observed; inflation would then be expected to be temporarily lower than otherwise. The temporarily changed pattern of inflation during and after the large, sharp decline in oil prices in 1986 demonstrated how these effects operate. After having been relatively low and relatively steady at about 4 percent for a few years, inflation dropped sharply to about 1 percent after oil prices plummeted in 1986. It then returned to near its earlier level after oil prices stopped their decline.

SUMMARY

- An abrupt increase in oil prices temporarily raises the inflation rate and lowers the real growth rate.
- Oil price shocks lower employment and output by reducing the income consumers have to spend on goods produced in the United States and by reducing the real supplies of money and credit.
- Structural changes in the energy sector have significantly increased the flexibility and reduced the vulnerability of the U.S. economy to oil price shocks.
- The energy intensity of most industrialized economies and oil's share in total energy use have fallen significantly since the 1970s, reducing their sensitivity to oil price shocks.

MACROECONOMIC POLICIES

The Administration remains committed to the goal of strong economic growth. Keeping inflation low and stable is essential to achieving this goal. *Although the recent oil price shock has reduced* *economic growth and raised inflation, the proper design of macroeconomic policies can ensure that these effects will be temporary and that the economy will soon return to solid growth with lower inflation.*

THE ADVANTAGES OF SYSTEMATIC POLICIES

Systematic monetary and fiscal policies directed toward long-term goals are likely to lead to better economic performance than a sequence of discretionary reactions to economic news aimed at affecting near-term economic conditions. Businesses and households base their assessments of the future on their expectations of interest rates, inflation, tax rates, and other important economic variables. Such forward-looking assessments are important factors in their plans and decisions. Frequent and unanticipated policy changes produce uncertainty in the private sector and reduce the ability of businesses and households to make informed long-term plans.

One of the most important advantages of systematic policies is that they lead to policy *credibility*, the belief that policies will be adhered to consistently over the long run. Credibility permits policymakers to respond predictably to shocks of various kinds without creating undue concern that long-term expectations will change inappropriately.

Even though it might be quite complex, a well-designed systematic policy is likely to lead to better economic performance than either discretionary policies or rigid policies. For example, some argued in the 1960s and 1970s that the growth rate of the money supply should be held constant. While such a policy might have been appropriate at one time, it is clearly too rigid because of shifts in the relationship between money and income in response to deregulation and innovation in the financial sector.

Adhering to a systematic policy may require changes in instruments such as the money supply growth rate or interest rates, for example, to address shocks such as sudden steep increases in oil prices and shifts in the relationship between the money supply and income. Under a systematic policy, money and credit growth rates might change in the wake of an oil price shock or other major disturbances to ameliorate the adverse effects on unemployment and output. Once the price shock has passed through the economy, the policy would readjust monetary and credit policy instruments in a way that would continue to guide the economy toward its longer run goals.

The response to the October 1987 stock market plunge illustrates how monetary policy can respond predictably and temporarily to a shock without unduly raising long-term inflation expectations. In the period following the decline in the stock market, the Federal

Reserve temporarily increased the availability of bank reserves. Because the Federal Reserve's credibility had been enhanced by its having curbed inflation, the public believed that this action was temporary, and therefore it did not change its long-term inflation expectations. And when the Federal Reserve judged that this financial shock had passed through the system, it adjusted the supply of bank reserves to a path consistent with progress toward its goal of price stability.

DESIGNING FISCAL AND MONETARY POLICIES

Both fiscal policy and monetary policy have a role to play in mitigating the impact of a price shock and allowing the economy to return quickly to its long-run growth path. Changes in government spending or tax receipts, which would occur automatically as the economy fluctuates, alter the aggregate demand effect of a price shock. Similarly, the Federal Reserve's policy tools can influence money growth and interest rates to temper the shortfall in production and employment.

Fiscal Policy

A well-designed fiscal policy will automatically respond to an oil price shock. To the extent that real GNP, incomes, and employment decline, income tax revenues and other income-related tax payments will automatically fall and transfer payments provided by programs like unemployment insurance will automatically rise. These "automatic stabilizers" will cushion the reduction in after-tax income and spending power and thereby help sustain spending and employment. Such automatic stabilizers mean that the deficit will automatically rise as tax receipts fall and government expenditures rise relative to what they would otherwise be.

The Omnibus Budget Reconciliation Act of 1990 makes changes in the budget deficit reduction law that give these automatic stabilizers more flexibility to work effectively. The previous formulation of the deficit reduction law set nominal dollar deficit targets that could be suspended if economic growth was forecast to be less than 1 percent for two consecutive quarters. Otherwise, deficit targets did not change even if oil price or other shocks changed macroeconomic conditions. In this sense, the old law actually put constraints on the operation of these automatic stabilizers. The revisions embodied in the new budget law require the deficit targets to be adjusted through fiscal 1993 in response to changes in economic conditions as reflected in annual forecasts made by the Administration.

The new budget legislation has other systematic and credible features: It sets caps on spending levels for the next 5 years, phases in spending and revenue changes over 5 years to avoid causing a shock to aggregate demand, and provides for more stringent enforcement of the budget rules. *The recent oil price shock does not require any alteration in this long-run plan for attaining fiscal balance.*

It is appropriate for monetary policy to respond to this change in fiscal policy by permitting the decline in interest rates that would accompany the anticipated decline in future government borrowing brought on by the deficit reduction plan. Adjusting the instruments of monetary policy in this direction can encourage the private sector to increase spending, especially on growth-enhancing investment projects, enough to offset declines in employment and production that might otherwise arise from the shift in fiscal policy. The oil price shock does not alter the appropriateness of this monetary policy response.

Additional discretionary changes in fiscal policy designed to offset the temporary effects of the price shock would not be appropriate, although tax reform is still needed to improve incentives for saving and investment. Discretionary changes in the instruments of fiscal policy, such as changes in public spending, require legislative approval, which typically takes many months. It may well be that the effects of the recent oil price shock will not last as long as the gestation period for a discretionary fiscal policy response. As a result, automatic fiscal policy responses are likely to be more effective than discretionary responses in addressing oil price increases and many other types of shocks.

Monetary Policy

Monetary policy has a key role to play in ensuring that a one-time increase in oil prices is not converted into an increase in the underlying inflation rate—via a wage-price spiral, for example. The U.S. economy has benefited during the recent expansion from a monetary policy that has helped keep the underlying rate of inflation relatively low and relatively steady compared with the 1970s. This move to prevent inflation from rising as economic growth quickened in 1987–88 has prevented a repetition of a key policy mistake of the 1970s: that is, policy spurring the economy along a path of accelerating inflation. *The credibility that this experience has built, combined with the recent relatively low inflation rates, gives the Federal Reserve more elbow room to allow inflation to rise temporarily when a price shock strikes without causing long-run inflation expectations to rise.*

As long as the relationship between the M2 measure of the money supply and GNP remains stable, the Federal Reserve can lead the economy toward lower inflation by gradually reducing the long-run growth of the money supply. Such a policy does not preclude allowing higher or lower growth rates of M2 over shorter periods, as called for either by shocks to the relationship between the money supply and GNP or by other shocks.

Given the stability of the relationship between GNP and money, keeping money supply growth from falling in the face of a downturn in GNP caused by an oil price shock is essential to preventing an unnecessarily large and prolonged decline in economic growth. Depending on the size of the shock, a temporary increase in money supply growth might be necessary to stabilize economy-wide spending and to help offset the decline in GNP that occurs when an oil price shock reduces real income and raises the general price level.

Maintaining money supply growth or increasing it somewhat may result in a temporary increase in nominal GNP growth. But eventually nominal GNP growth should return to a path consistent with low and stable inflation. Given credible monetary policy, an increase in nominal GNP growth need not cause an increase in long-run inflation expectations. A one-time increase in the price of oil would warrant only a short-run increase in nominal GNP growth. The oil price shock itself will cause only a temporary increase in the inflation rate if nominal GNP growth reverts to a rate consistent with the trend toward low and stable inflation after the one-time adjustment attributable to the price shock.

LESSONS FROM PREVIOUS SHOCKS

The experiences of the United States and other large industrialized countries during the previous oil price shocks show the crucial role that maintaining credible and systematic long-run fiscal and monetary policies play in allowing the economy to respond relatively smoothly.

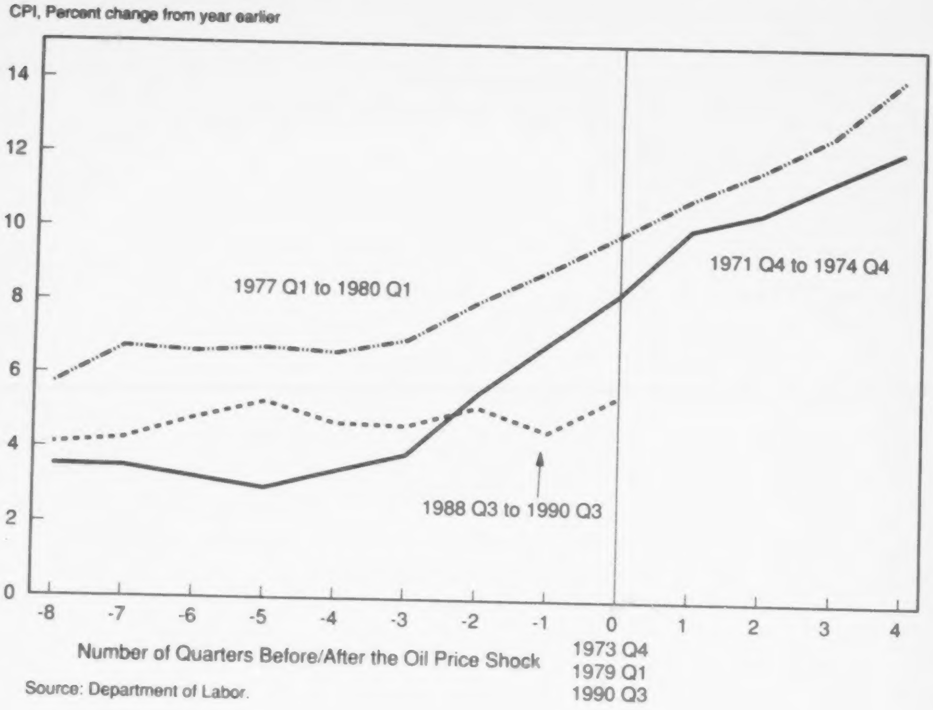
Before the onset of each of the oil shocks of the 1970s there was considerable concern that the overly expansionary monetary and fiscal policies during the preceding years were building increasingly high rates of inflation into the major industrialized economies. Thus, the monetary policy authorities had relatively little credibility: There was little reason to believe that inflation would be restrained even before the oil price shock occurred.

Chart 3-2 plots U.S. consumer price inflation during the 1970s, with a focus on the periods before and after oil price shocks. The chart reveals the often overlooked fact that *the inflation rate was rising, and rising at a fairly rapid rate, in the period preceding each of the oil price shocks of the 1970s.*

After having been very low and stable until the mid-1960s, inflation then rose steadily, apart from its temporary suppression when price controls were in effect in the early 1970s. The oil shock of 1973–74 then put additional upward pressure on the inflation rate. To prevent inflation and inflation expectations from spiraling further upward, monetary policies were tightened generally. With little credibility, there was little room for monetary policy to permit the price shocks to affect only the price level without giving

Chart 3-2 **Inflation and Oil Shocks in the United States**

Inflation was high and rising before the two oil price shocks of the 1970s but was relatively low and steady before the 1990 shock.



Source: Department of Labor.

firms and households the impression of continued accommodation and tolerance of higher inflation. An increase in money growth could not credibly be viewed as temporary.

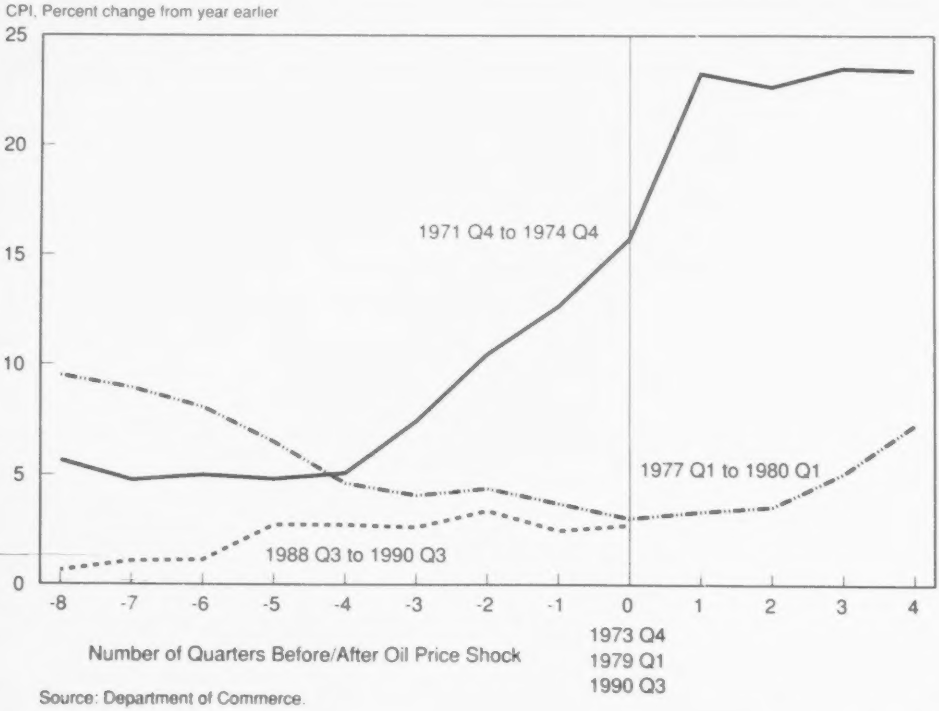
As the contractionary effects of the 1973–74 oil price shock and restrictive policies took hold, policy again returned to an overly accommodative stance. The deceleration in the growth of the money supply that accompanied the 1973–75 recession was followed by a reacceleration: The money supply grew at double-digit rates from 1975 through 1977. Fueled by faster growth in the money supply, spending grew at rates incompatible with low inflation, culminating in the high and rising inflation rates at the end of the 1970s.

These inflation rates resulted from growth in demand that continually outstripped growth in supply. So long as demand, which was fueled primarily by excessively expansionary monetary policy, grew more rapidly than the economy's ability to supply goods and services, prices rose. Similar boom-and-bust patterns were being repeated in other industrialized countries as well. Having excessively stimulated demand, these countries found they had little credibility to ease policy temporarily in response to the second oil price shock without further raising inflation and expectations of it. Thus, to prevent their already uncomfortably high inflation rates from accelerating, many countries including the United States again tightened monetary policy when the 1979–81 oil price shock struck.

Japan, a notable exception, provides a useful comparison. Japan had high and rising inflation rates when the 1973–74 oil price shock occurred, and inflation remained above 20 percent in the period immediately after the onset of the shock (Chart 3–3). Like other countries, Japan experienced a severe recession in 1974–75 because the oil shock hit when there was little policy credibility or room for adjustment of the instruments of policy. To remedy that situation, the Japanese Government moved to a more systematic and credible monetary policy in the latter half of the 1970s. By reducing money growth, the government lowered inflation and then kept it in check. This policy produced inflation that was low and falling by the time the second oil price shock hit.

Chart 3-3 **Inflation and Oil Shocks in Japan**

Inflation was high and rising and remained high in the first oil price shock but was low and remained low in the second oil price shock.



Source: Department of Commerce.

The more credible systematic stance of monetary policy followed in Japan between the two oil price shocks made it possible for Japan to avoid much of the negative economic impact that other industrialized economies experienced during the second oil shock without generating fears that inflation and expectations of inflation would spiral upward. As a result, inflation was not permanently raised, and output remained close to its longer run path. In fact, by the definition of recession used in the United States, Japan completely avoided a recession following the second oil shock.

SUMMARY

- Systematic monetary and fiscal policies allow for changes of the instruments of policy in response to oil price shocks without sacrificing long-term policy goals. For example, automatic stabilizers allow for some temporary deficit increases as the economy weakens after an oil price shock, without altering the long-run path to structural deficit reduction.
- Macroeconomic policy responses to oil price shocks in the 1970s were constrained because past policy mistakes had engendered a lack of credibility. The United States entered the two oil price shocks of the 1970s with excessive monetary expansion causing high and rising inflation.
- The relatively low and steady underlying inflation rate that preceded the 1990 oil price shock enables monetary policy to respond more appropriately without losing its credibility in controlling inflation.

SHORT-RUN ENERGY POLICY RESPONSE

The principle of providing for flexible responses to changing short-run conditions while maintaining a clear and consistent focus on long-term objectives is an appropriate guide for energy sector policies as well as for monetary and fiscal policies. Given the high value of maintaining flexibility in the face of changing market conditions, pressures to impose price control and allocation schemes and to limit trading in energy futures markets should be resisted. Release of oil from government-controlled strategic reserves can, under some conditions, play a useful role in cushioning the impact of oil price shocks.

THE DANGERS OF REREGULATION

Energy market regulation, like regulation in other markets, can reduce the efficiency of the economy. Incorrect price signals result in a misallocation of supplies among consumers and, as both investment and innovation are affected over the longer term, can reduce output and adversely affect both producers and consumers. In addition, because regulation reduces flexibility, regulated markets react poorly to price shocks and thus exacerbate their effects. The benefits of relying on markets rather than regulation in the energy sector can best be understood by reviewing how regulation raised the costs of the oil price shocks of the 1970s.

In the aftermath of the 1973–74 oil price shock, domestic crude oil prices were held substantially below world market levels. As a result, domestic prices for petroleum products, which reflected an average of the prices of controlled domestic and uncontrolled imported crude oil, were also below world market levels. Individual decisions regarding the use of oil products were based on these distorted prices, even though each additional barrel of oil demanded was met through increased imports at the higher world price. Greater use of oil and increased demand for oil imports was the inevitable result.

Although the process of oil price decontrol began before the 1979–81 oil price shock occurred, the combination of the remaining price controls and a burdensome and complex allocation system had a particularly pernicious effect. While artificially low prices inflated demand, the allocation system distributed available products in a way that magnified imbalances between demand and supply. As a direct result, consumers wasted many hours waiting in long gasoline lines.

Substantial deregulation of energy markets over the last 15 years now allows markets to respond quickly and flexibly to changing conditions. *In the second half of 1990, oil and natural gas markets freed from earlier price controls and restrictions generally functioned well* (Box 3–1). In sharp contrast to the 1970s, gasoline lines did not reappear. While the higher petroleum product prices that follow an oil price shock may be unwelcome to consumers and energy-using firms, they are clearly preferable to the alternative of policy-induced shortages caused by misleading price signals and government-directed misallocation of oil supplies.

ENERGY FUTURES MARKETS AND SPECULATION

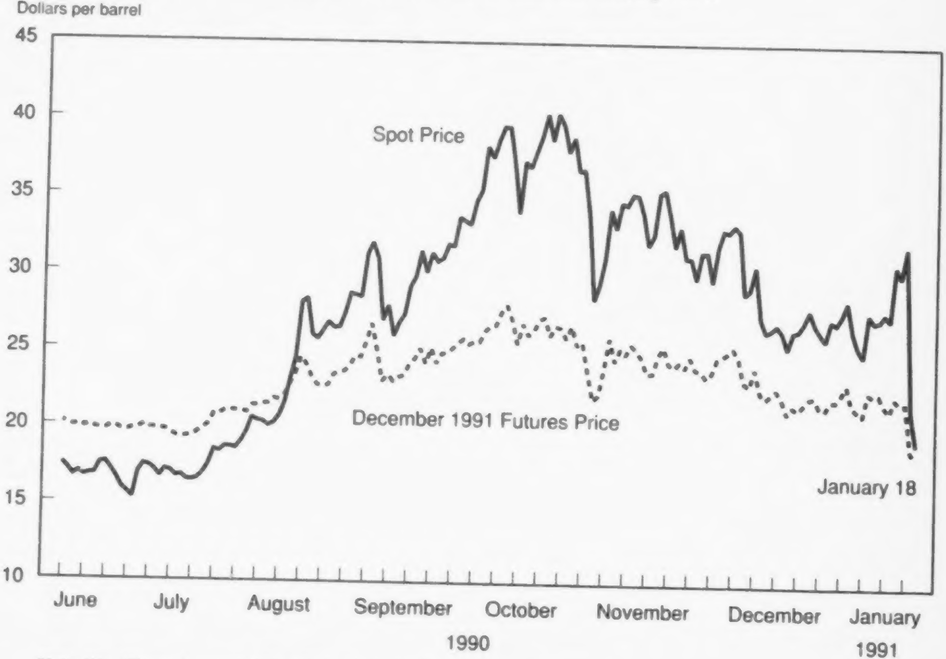
In the wake of Iraq's invasion of Kuwait, some commentators have blamed speculation in oil futures markets for oil price volatility and have suggested that the government limit futures market trading. Because futures markets play a central role in increasing energy market flexibility, however, a significant limitation on trading would impede, rather than aid, adjustment.

Futures markets provide a public forum in which commitments to deliver a standard amount of a commodity at a specified future date and location can be bought and sold. Trading in organized spot and futures markets serves two important functions: price discovery and risk-shifting. Price discovery is achieved by placing accurate information regarding the latest market activity in a centralized public forum. In this respect, commodity markets are no different from stock markets. Risk-shifting, or hedging, is an activity undertaken by firms or individuals with a direct business interest in the production, distribution, or use of the commodity being traded. Producers of a commodity might wish to protect against a price decline by locking in a future commitment to deliver at a known price. Processors desiring to protect against a possible rise in product prices can hedge by buying future delivery commitments at a known price.

The prices that balance demand and supply of spot and future delivery commitments reflect current market expectations of near-term and long-term prices. Chart 3-4 shows that prices of oil for delivery at the end of 1991 have been far less volatile than prices for delivery in the near future. *The relationship between spot and futures market prices observed since August 1990 has consistently reflected the expectation that the Gulf crisis would be relatively short-lived.*

Chart 3-4 **Oil Spot Prices and Futures Prices**

Although the spot price of oil has fluctuated widely, the futures market price of oil to be delivered in December 1991 changed relatively little between June 1990 and January 1991.



Note: West Texas Intermediate Crude. Spot price is nearest month contract.
Source: New York Mercantile Exchange.

Opportunities for hedging provided by oil futures markets serve the public interest in two main ways. First, hedging allows firms participating at only one stage of the oil business to remain viable in the volatile world oil markets of the late 1980s and early 1990s. Second, hedging has allowed buyers to be more aggressive in taking advantage of spot market opportunities. For example, as oil prices fell sharply in the first half of 1990, oil companies accumulated unusually large private stocks. Their ability to hedge against a continued decline in prices using oil futures markets allowed them to share the risks of holding these large stocks.

Speculative trades are transactions not motivated by a direct interest in business activities related to the commodity being traded. A speculator goes "long" by purchasing the rights to future delivery of a commodity in the expectation that its price will rise as the specified delivery date approaches. If prices actually rise, the speculator profits by selling this right; if prices fall, the speculator loses the difference between the price at which he is committed to take delivery and the actual price at the delivery date. A speculator goes "short" by selling a commitment to deliver the commodity at a future date, hoping that prices will fall. "Long" speculators add to the demand for futures, driving up futures prices. "Short" speculators, by selling their promise to deliver in the future, add to the supply, and thus drive futures prices down.

Because the underlying motivation for an individual futures market transaction is impossible to determine, the claim that speculation has caused higher oil prices cannot be conclusively supported or refuted. *The available evidence, however, suggests that speculation is more likely to have lowered prices than to have raised them in the aftermath of Iraq's invasion of Kuwait* (Box 3-2).

Box 3-2.—Futures Markets Speculation and Price Volatility

The major participants in oil futures markets include integrated oil companies, trade houses, refiners, marketers, producers, end-users, and traders without any direct business interest in oil markets. Because all but the last category of participants may engage in both risk-shifting and speculative trades, it is impossible to measure the extent of speculation directly.

According to recent data from the Commodity Futures Trading Commission, large traders with no direct business interest in oil markets generally held only about 10 percent of the total outstanding future delivery commitments in August and September 1990. Moreover, on a net basis, these traders were "short" rather than "long." The net effect of the participation of these purely speculative traders in futures markets in the immediate aftermath of the oil price shock was therefore to reduce futures prices rather than to raise them.

Following the rules of the New York Mercantile Exchange, as soon as oil futures prices dropped $7.50 the day after Operation Desert Storm began, oil futures trading was automatically suspended for an hour. Under conditions such as these, a trading suspension is appropriate because it gives the marketplace time to absorb unusual bursts in volume or information flows. However, once information has been widely disseminated, there is no economic basis for stopping the market from expressing its evaluation of future conditions. Limits on futures trading that impede risk-shifting transactions would impose a real economic burden, but they would not stop speculation. Closing futures markets would simply shift activity to offshore markets or to private, unreported transactions, thereby obstructing the price discovery process. Ironically, the public at large, having the least access to information, would be most disadvantaged. In a fluid economic situation, ignorance is hardly ever bliss.

STRATEGIC OIL RESERVES

The strategic oil reserves of the United States and other countries are intended both to deter the use of the "oil weapon" by exporting nations and to cushion the effect of sizable, temporary supply disruptions by augmenting the supply of oil. At the beginning of 1991, 586 million barrels of oil, equal to about 80 days of U.S. imports at 1990 import rates, were held in the U.S. strategic reserve.

Policies for the use of strategic reserves should aim to complement the production increases and consumption declines that naturally follow an adverse price shock, not to substitute for them. Similarly, strategic reserves should not be used to respond to oil price movements other than adverse price shocks, since to do so would have the effect of substituting government storage of oil for private storage.

The magnitude of energy price movements is one important indicator of the seriousness of a disruption. Prices of petroleum products rose substantially from July to October 1990, but, adjusted for inflation, they remained well below historical peaks. Indeed, the average inflation-adjusted retail price of gasoline in the fourth quarter of 1990 was lower than in most of the 1950s and in the first half of the 1980s.

In the present situation, United States policy has emphasized the replacement of embargoed oil with additional production from other sources. Saudi Arabia, Venezuela, the United Arab Emirates, the United States, and other producers have, in recent months, increased production by an amount sufficient to offset fully the loss of supplies from Iraq and Kuwait. These production increases have eliminated the need for continued depletion of existing private and public stocks. Had the price impact of the supply disruption been immediately attenuated through the release of strategic reserves, these production increases might not have occurred. Conservation of existing stocks can be especially attractive in situations where anxieties over the possibility of severe supply disruptions in the near future are a major influence on current prices.

Coordination among countries holding strategic reserves is important, since the market for oil is a world market, and a release of reserves by any one country will lower prices for consumers throughout the world. Coordination of releases can allay concerns that some countries will seek to benefit from releases made by others while withholding their own reserves. The International Energy Agency (IEA) is the primary mechanism for coordinating the use of strategic reserves. Such coordination was demonstrated in early January 1991 when IEA member governments agreed to make government-controlled stocks available to the marketplace if hostilities broke out in the Persian Gulf region. This program was begun following the start of Operation Desert Storm.

SUMMARY

- Price controls and government-directed allocation schemes significantly magnified the adverse effects of prior oil price shocks. Their reintroduction would be an inappropriate response to energy supply disruptions.
- Closure of oil futures markets would impede risk-shifting and price discovery in oil markets with few, if any, offsetting benefits.
- Strategic oil reserves can cushion the effects of temporary supply disruptions. Releases should be coordinated internationally and with other response measures.

LONGER TERM ENERGY POLICIES

Primary reliance on markets to determine prices, quantities, and technology choices provides the foundation for sound longer term energy policies, and thus for the Administration's National Energy Strategy (NES). Such policies can sustain economic growth and blunt the effects of any future oil price shocks. However, either for structural reasons or because of government-created barriers, private markets cannot always be expected to work efficiently. In those situations, as the NES recognizes, policy can be applied to promote efficient market operation.

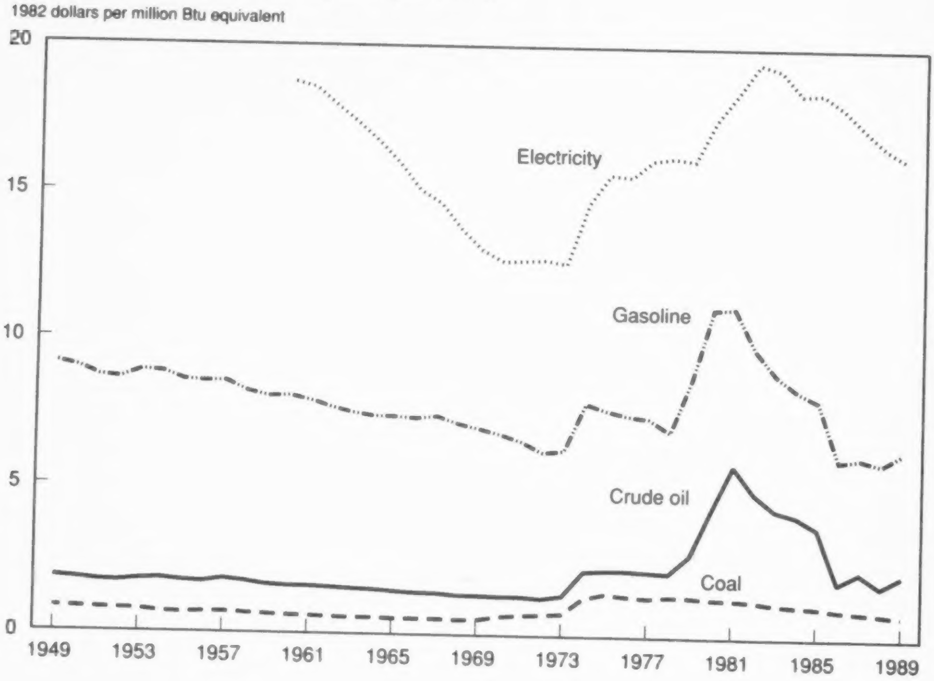
For example, reducing the extent to which the United States and its friends and allies obtain energy from insecure sources of supply offers national security and foreign policy benefits to which private market forces are unlikely to give adequate weight. Private markets may also not give adequate weight to environmental considerations. As the NES recognizes, however, policies concerned with energy security or environmental protection must be well-designed to avoid excessive costs and to ensure that economic growth can continue to be fostered through the availability of ample supplies of reasonably priced energy.

LONG-TERM TRENDS IN ENERGY PRICES AND USE

Longer term energy policies must not be influenced by the widely held misconceptions that energy prices will almost certainly rise and that the United States is a profligate user of energy. The record of the past 40 years shows that the real price of energy has *not* risen steadily. Rather, the real prices of crude oil, oil products, and electricity have fluctuated significantly, with periods of falling as well as rising prices (Chart 3–5).

Chart 3-5 **Real Energy Prices**

Real energy prices do not show a long-term upward trend.



Source: Department of Energy.

A review of the basic forces that will influence energy markets in the years ahead gives mixed signals regarding future price movements. Some factors point to a tightening market in the medium or long run. Oil analysts project that production in the United States and the Soviet Union, currently the world's largest oil producer, will continue to decline. OPEC, whose member states already account for about one-third of world production and about three-fourths of proven reserves, is expected to supply a rising share of the world's oil. At the same time, world energy demand could begin to grow rapidly if the rates of increase in energy efficiency observed since 1973 are not maintained, or if rapidly growing energy use outside the major industrialized countries becomes a more important factor in the world market.

Other factors, however, suggest a future in which real oil prices rise slowly, if at all. In recent years, growth in the world's proven oil reserves has far outstripped growth in oil production. Since 1973, when higher oil prices began to stimulate more exploration, world oil reserves have risen by about 50 percent, while world crude oil production has increased by less than 10 percent. At the 1990 production rate, the world now has about a 45-year supply of proven reserves; at this same production rate, the world had less than a 30-year supply of proven reserves in 1973. Oil-exporting countries with large reserves recognize that high oil prices encourage greater use of other existing forms of energy and accelerate the development of new energy and end-use technologies. Economic and environmental considerations that have increased the use of natural gas as a substitute for oil should also help to keep oil prices low. *The uncertain outlook for energy prices increases the value of policies that are flexible enough to serve national interests under a wide variety of energy market conditions.*

The common belief that the United States is a wasteful energy user is also not supported by the data. International comparisons show that U.S. energy use trends do *not* differ markedly from those in other countries. Economy-wide energy intensity has declined in other major industrialized countries, as in the United States, since 1973. Moreover, direct comparisons of energy use per unit of output in individual sectors show that energy intensities across countries have increasingly converged. Differences in natural resources, population density, industrial mix, urban layout, commuting distances, and dwelling sizes appear to account for much of the variation in energy use patterns across countries (Box 3-3).

ENERGY SECURITY

A key goal of longer term energy policy is to reduce the vulnerability of the U.S. economy to energy price shocks and possible supply disruptions. Popular opinion aside, our vulnerability to oil price shocks is not determined primarily by the level of our oil imports. In an increasingly integrated world economy, America's energy security cannot be separated from that of its friends, allies, and trading partners. For one thing, the price of oil bought and sold in the United States is determined on world markets by global supply and demand, not by U.S. production and consumption. In addition, the Nation's ability to export goods and services depends on the health of foreign economies, and exports now account for about one-eighth of GNP. Thus oil price shocks can have substantial indirect effects on the U.S. economy through their impacts on the economies of our major trading partners. For these and other

Box 3-3.—International Comparisons of Energy Use

Recent data show that the average new car purchased in the United States achieves a level of fuel economy slightly better than the comparable average level in Japan and close to that in Germany. However, in 1988 the United States had 573 passenger cars for every thousand people, compared to only 476 cars per thousand people in West Germany and 251 cars per thousand people in Japan. Moreover, in the same year, the average car traveled more than 10,100 miles in the United States, compared with 8,000 in Germany and only 6,500 in Japan.

In part, divergent patterns of vehicle ownership and use are attributable to large differences in retail gasoline prices—German and Japanese retail prices were respectively $2.20 and $3.43 a gallon in 1988, compared with a U.S. price of $0.95. Higher foreign prices to a large extent reflect differences in taxes on gasoline: Combined Federal, State, and local taxes of $0.29 a gallon were far below German and Japanese taxes of $1.42 and $1.60, respectively. However, comparisons with Canada and Australia, which also have high annual miles of travel per vehicle despite gasoline prices significantly above U.S. levels, suggest that low population density and longer commuting distances are major reasons for our additional travel.

A greater reliance on automobiles, rather than the energy inefficiency of those automobiles, is therefore the primary reason the United States uses so much oil in its transportation sector. Assuming that the efficiencies of on-the-road fleets equalize as older cars are replaced, differences in transportation fuel use can only be narrowed further using policies that reduce U.S. car travel.

Energy use in residential heating provides another example of the importance of choosing an appropriate basis for comparisons. Correcting only for climate differences, the United States used more heating energy per dwelling than other industrialized countries in 1987 (although the gap between the United States and other countries narrowed substantially over the last 15 years). However, when the greater floor space in a typical American home is taken into account, the United States was among the more efficient users of residential heating energy.

reasons, modest changes in U.S. energy production, consumption, or imports are unlikely to have much impact on the Nation's energy security.

The maintenance of strategic petroleum reserves and agreement among reserve-holding nations on credible policies for their coordinated use can provide both a deterrent to deliberate supply disruptions and an effective offset to disruptions that may occur. *Energy security can also be significantly enhanced by expanding and diversifying the sources of oil and energy supplies available to the United States and its friends and allies.* The United States, as a leader in exploration and drilling technology, can play an important role in identifying and developing new reserves. Efforts in this area should focus on natural gas as well as on oil, since gas development that displaces oil consumption can enhance energy security and also provide environmental benefits. The removal of remaining barriers to the development of economically viable domestic oil and gas resources, the increased use of coal, nuclear, and renewable energies, and the exploitation of efficient energy conservation opportunities can also contribute to energy security.

Energy diversification efforts will involve some shift toward domestic energy sources. But it must be recognized that opportunities for increasing U.S. petroleum production are limited: By 1990 U.S. production had declined by 22 percent from its peak in 1970. Moreover, a large-scale substitution of high-cost domestic energy for low-cost imported energy could significantly slow economic growth. It simply makes no sense to spend large sums to displace imported energy when supply diversification or strategic reserves can provide comparable energy security benefits at lower cost.

Even the total elimination of energy imports would not insulate the economy from oil price shocks. There would be no terms-of-trade effects under such circumstances, but conditions on the world oil market would still be reflected in domestic prices. For example, although the United Kingdom is not a net importer of oil, its producers and consumers faced higher oil prices after Iraq invaded Kuwait. The only way to decouple domestic and world energy prices is to manage trade in energy products. Such a policy would have much higher long-run costs than those imposed by energy price fluctuations.

STRENGTHENING MARKET FORCES

Federal actions can promote efficiency and competition in energy markets in several ways. The movement toward complete deregulation of wellhead prices for natural gas, pursuant to the Natural Gas Wellhead Decontrol Act of 1989, is contributing substantially to the economy's flexibility. Currently, new gas pipelines require the approval of the Federal Energy Regulatory Commission (FERC), which also regulates rates charged for the transmission of gas. The pipeline approval process should focus on environmental and safety factors rather than on the extraneous considerations that enter into current FERC proceedings. Pipeline rates should be regulated only to prevent monopoly abuses, and regulation should be implemented in a way that fosters economic efficiency.

Retail electricity rates are regulated at the State level, and competition has traditionally played a minor role in electricity markets. In recent years, however, State regulators have begun to allow competition for the right to construct new generating facilities. The Federal Public Utility Holding Company Act, which limits an electric utility's participation in competition to build new capacity outside of its service area, should be reformed to increase the role of market forces. Steps should also be taken to ensure that access to the high-voltage transmission network is not controlled in a manner that restricts competition.

State regulation of electric utilities has generally had the effect of tying profits to the amount of power sold, thereby discouraging utilities from assisting their customers in pursuing cost-effective conservation opportunities. Some States have adopted integrated resource planning programs that allow utilities to promote, undertake, or subsidize conservation investments on their customers' premises. Such programs can speed the diffusion of efficient new conservation technologies. By helping users reduce their demand for electricity, these programs reduce the need for new generating plants.

Utility programs that subsidize conservation investments on customer premises must be carefully designed if they are to be both efficient and equitable. The price of electricity itself already provides customers with an incentive to conserve. They receive a return on their investments in conservation in the form of lower electricity bills. However, in some areas the retail price of power is below the cost of production from new capacity. In such circumstances the conservation incentive provided by electricity prices is generally too low. Therefore, a utility subsidy for customer conservation investments equal to the difference between the price of electricity and the cost of producing it can enhance economic efficiency. *But providing a subsidy equal to the full cost of producing electricity from new capacity is both inefficient and inequitable.* It is inefficient because conserving consumers are paid both the cost of the power saved (through the subsidy) and its price (through lower electricity bills). As a result, consumers may be induced to make conservation investments that raise, rather than lower, the total utility and consumer cost of balancing demand and supply for electricity. It is inequitable because the utility must recoup the double payment to conserving customers by raising the rates charged to other customers.

Adverse environmental impacts are another social cost of power production, and it is sometimes asserted that these impacts merit the provision of additional utility subsidies for customer conservation investments. However, electricity prices already reflect utilities' costs of compliance with environmental regulations. If society's valuation of environmental effects rises, the proper remedy is to tighten environmental regulation. That approach will reduce environmental impacts directly and also increase incentives for conservation by raising electricity prices.

Energy Research and Development

Market forces also need to be strengthened in the area of research and development. Private firms are likely to underinvest in research that promises widespread benefits if the firm carrying out the research cannot use patents or other means to prevent other firms from capturing most of those benefits. Government's proper role is to support basic, precompetitive research in the energy sector rather than to pick winners and losers. Premature government commitment to a selected technology can foreclose the development of other, more attractive alternatives or of a diversified set of technologies suited to specific applications or regional markets.

The lack of a clear yardstick for measuring technological promise or valuing research progress presents a challenge for both the initial allocation of research resources and the assessment of ongoing programs. A policy that supported only technologies whose commercial viability was imminent might produce an impressive batting average without making any real contribution to technological advancement. Yet, there must be some reliance on market signals to avoid permanent commitments to technological dead ends. *One promising approach to balancing these two competing concerns is to rely on government-industry consortia in which industry supplies a major share of funding and plays a major role in setting the research agenda.*

Energy Use Standards

Some have suggested that the adoption of stringent energy use standards provides a low-cost approach to reducing energy use. *While efficiency standards can play a constructive role in certain circumstances, their significant potential for causing economic harm must be recognized.* Unlike regulatory reform, energy use standards generally limit rather than expand flexibility and choice. Moreover, the goal of energy policy is to enhance prospects for economic growth while meeting legitimate energy security and environmental concerns, not to minimize energy use.

It is sometimes argued that energy-efficiency standards are justified because consumers do not purchase goods with the lowest combined purchase and energy costs. But, claims that standards are a no-lose proposition often fail to account fully for all product attributes important to consumers. In choosing among various models of cars, for example, consumers value performance features as well as energy efficiency and cost. Indeed, absent such preferences it is difficult to explain the popularity of optional powerful engines that increase the cost of cars while decreasing their energy efficiency. Without evidence that structural or government-created barriers exist and cannot be addressed directly, government regulation of energy efficiency should be viewed with skepticism.

SUMMARY

- The long-run outlook for energy prices is uncertain. Therefore, long-run policies should be flexible enough to serve national interests under a wide variety of energy market conditions. These considerations support continuation of the Nation's successful policy of market reliance.
- Energy security can best be pursued through the accumulation of strategic reserves and diversification of energy supplies. An excessive focus on minimizing energy imports can have significant adverse economic impacts.
- Further regulatory reform at the Federal and State level can improve the operation of energy markets. Policy should strive to maximize flexibility and choice and to avoid the introduction of new distortions.

CONCLUSION

The same policy principles are appropriate for macroeconomic policies and energy market policies. Systematic policies that permit predictable responses to changing short-run conditions, while maintaining a clear and credible focus on long-run objectives, should be pursued. Such policies will position the economy to meet the challenge presented by oil price shocks.

Well-designed policies can significantly reduce but not entirely eliminate the unfavorable effects of such shocks. Large and abrupt increases in oil prices can still adversely affect the economy. These oil price shocks present policymakers with the prospect of temporarily higher inflation and slower real growth rates.

Experience with the price shocks of the 1970s has led to policies better able to handle an oil price shock. Having produced a low and steady inflation rate and earned the credibility that comes from such performance, the Federal Reserve has preserved the latitude to cushion the impact of oil price shocks without increasing inflation expectations. The removal of price and allocation regulations in energy markets allows market forces to guide products to their most valued uses, while the decrease in the intensity of energy use has made the overall economy less sensitive to oil price shocks. Strategic petroleum reserves in the United States and other countries can now cushion the effect of large temporary supply disruptions by increasing the supply of oil. For these reasons, the U.S. economy is now able to adapt more readily to an oil price shock than it was in the past.

CHAPTER 4

Flexibility and Change in the Economy

ONE OF THE MOST IMPORTANT strengths of the U.S. economy is its flexibility. Flexibility enhances the ability of a market economy to respond to change and, thereby, enhances the rewards to innovation. Strong demand for an innovative new product both rewards the innovator and is the signal that draws additional resources into production to meet the demand. An innovation that lowers cost drives down price, signaling greater availability to potential consumers and causing them to increase consumption. In this way, the U.S. economy enhances the private and social benefits of desirable changes, such as technological improvements, and thereby encourages such changes. *This dynamism has generated the high standard of living that the United States and other free-market economies enjoy and is one of the major reasons that people all over the globe are now moving to reform their economies to increase their reliance on free markets.*

Flexibility also reduces the cost of adverse changes, such as a sharp, unexpected increase in the world price of oil. As discussed in the previous chapter, such shocks may increase unemployment temporarily, but a flexible economy adjusts to new circumstances effectively and can return rapidly to full employment.

THE PROCESS OF DYNAMIC CHANGE

A clear picture of the dynamic nature of the U.S. economy can be produced by a simple visual inspection of a modern home, which may contain a microwave oven, a home computer, a videocassette recorder (VCR), many pharmaceuticals, nonstick cookware, and numerous other products that did not exist a few decades or even a few years ago. The introduction and diffusion of all of these products required innovation, followed by the dedication of capital, labor, and other resources to new uses.

This reallocation of resources occurs without government planning. The government took no action to guarantee that between 1985 and 1990 thousands of video rental stores would open so that the owners of VCRs would have movies to rent. Individual entrepreneurs made the decision to risk their capital and their labor to undertake these new ventures. A comparison of the rate of introduction of new products and the growth of new industries in market economies and in nonmarket economies shows that *the government is not nearly as good as the market at organizing the reallocation of resources that must accompany innovation.* The ease with which resources can be shifted to the production of new goods and services raises the returns to innovation and thus encourages it.

The improvement in our lives provided by new products generally is *not* captured in statistics on real income growth. The increase from one year to the next in the number of cars, computers, video games, VCRs, or other products can be measured. But the qualitative leap in consumer welfare that occurs when a completely new product is introduced is extremely difficult to capture. Thus, conventional measures of economic progress, such as real income growth, will always tend to understate the benefits of the innovation and change that are the hallmarks of a free market economy.

Such qualitative changes are very difficult to predict, and government interference in market forces can suppress them without anyone even being aware of the loss. Thus a benefit to the economy of the significant deregulatory initiatives of the last 15 years is the greater potential for innovation that enhanced flexibility provides. Indeed, the U.S. economy is arguably more flexible than other market economies, which tend to be encumbered by greater government involvement in direct production of goods and services and by restrictions on labor market practices. *The long-run growth rate of the U.S. economy is dependent on continued efforts both to eliminate government policies that inhibit flexibility and to resist pressures to reimpose unnecessary regulation on the economy.*

SOURCES OF ECONOMIC CHANGE

The forces driving change come from several sources. On the supply side, *changes in technology create entirely new products and eliminate the demand for others.* For example, the invention of the transistor and the development of the microprocessor made possible desktop computers, VCRs, facsimile machines, compact disk players, and a host of other products that never existed before, while virtually destroying the vacuum tube industry. Innovation also increases productivity and thus lowers the cost of existing goods and services.

Population growth, immigration, and other demographic forces are also sources of supply-side change. Throughout its history the United States has absorbed wave after wave of immigrants, integrating them into the economy and thereby increasing production. Recently, the economy has demonstrated its flexibility by accommodating a tremendous increase in the number of women working outside the home. Between 1970 and 1990, the labor force participation of women increased from 43 percent to almost 58 percent, and this huge influx of new workers was not accompanied by a fall in the relative earnings of women workers. In fact, during the latter part of this period the earnings gap between female and male workers narrowed.

On the demand side, *changes in the demographic composition of the economy and changes in people's tastes and preferences alter the demands for particular goods and services.* The increasing fraction of the population that is elderly has greatly increased the demand for health care, for example, and the general movement toward suburban living and longer commutes has increased the demand for petroleum.

The international economy is another source of change in both supply and demand conditions. The end of World War II, and the reduced industrial capacity that the war left in other countries, created an enormous opportunity for exports and overseas investment for U.S. firms. More recently, the growth in international travel has created an opportunity for domestic airframe manufacturers; the leading domestic manufacturers now export more than half of their civilian aircraft production.

THE CHANGING STRUCTURE OF THE U.S. ECONOMY

The broad dimensions of historical change in the U.S. economy are illustrated by Chart 4–1, which shows dramatic reallocations of resources within the U.S. economy over the last 150 years. The growth of manufacturing and service industries and the relative decline of agriculture have required an impressive reallocation of capital, labor, and other resources. Yet government did not have to decide that workers should be moved from farms or factories into banks or hospitals. These movements were brought about by market forces, driven in turn by changing demands, demographics, and the introduction of new technology.

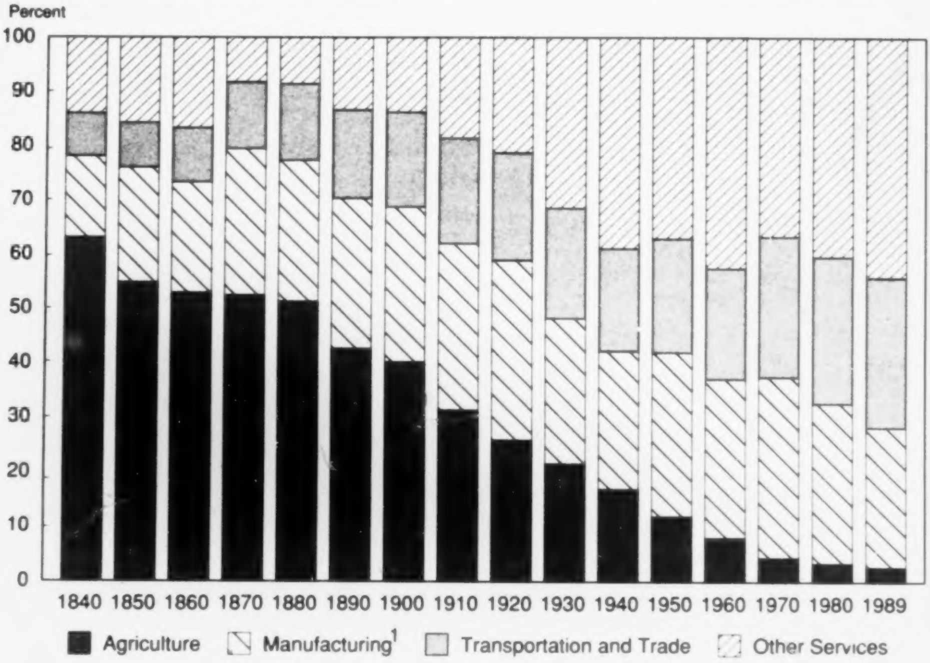
Growing Manufacturing Productivity and the Service Sector

Recent decades have seen a continuing shift in employment from goods-producing to service-producing industries. The goods-producing sector accounted for 41 percent of nonfarm employment in 1946, 28 percent in 1980, and 23 percent in 1990. A similar shift of employment toward the service sector has taken place in other advanced economies. In 1966, for example, the goods-producing sector accounted for 37 percent of employment in the 24 nations of the Organization for Economic Cooperation and Development, which includes most of the industrialized market economies of the world. By 1988 this figure had fallen to 30 percent.

Over the 1980s the service-producing sector of the economy had a net increase of 20 million jobs, which exceeded the 19 million net job increase in the overall economy. The two industries adding the

Chart 4-1 **Labor Force Shares by Industry**

U.S. workers have moved out of agriculture, first into manufacturing and then into services.



[1] Includes manufacturing, mining, and construction.

Sources: Department of Commerce and Department of Labor.

most jobs were business services, including advertising and computer and data-processing services, and health services (discussed below). More than 5 million net new jobs, or 27 percent of the net employment gain in the 1980s, were in business or health services.

This growth in service-sector employment has absorbed labor resources freed by rising manufacturing productivity, just as the growth in manufacturing employment absorbed resources released by rising productivity in agriculture in earlier decades. Manufacturing productivity increased at an average annual rate of 4.5 percent from 1982 to 1990. This allowed manufacturing to maintain a roughly constant share of real gross national product (GNP), even though only about half of the 3 million manufacturing jobs lost between 1980 and 1982 were regained by 1990.

Within these broad sectoral movements, many other changes occurred. During the last 10 years increased demand for convenience was a major force for change. The growth in retail grocery stores during the decade reflected this trend, as the concept of a "super" store with one-stop shopping for groceries, drugs, flowers, hardware, and other products took hold. Eating and drinking establishments enjoyed rapid growth, partially because the increase of two-worker families raised the value of people's time. On the supply side, advances in computer technology led to rapid expansion of such industries as computer and data-processing services, which alone added 499,000 jobs during the last 10 years.

Changing lifestyles and family structure have also led to a rapid increase in industries providing care to the old and the young. Industries providing residential, nursing, and personal care, largely for the elderly, and child day-care facilities added 825,000 net new jobs from 1982 to 1990.

Flexibility and Change in Labor Markets

The constant reallocation of resources from shrinking industries to growing industries means that jobs are constantly being created and lost in the economy. This process of reallocation occurs without necessarily preventing the achievement of full employment. Indeed, the simultaneous creation and destruction of jobs continues whether the overall economy is in an expansionary period or a recession. During the two contractions between January 1980 and November 1982, for example, total employment fell by 2.1 million jobs. However, this net decrease consisted of a loss of 2.8 million manufacturing jobs, partially offset by increased employment outside of manufacturing. Even within manufacturing, jobs were both created and lost. It is estimated that in an average quarter during this period, 6 percent of all manufacturing jobs disappeared, while 5 percent were created.

Simultaneous employment gains and losses can be seen at the level of individual establishments. A recent study of data from Wisconsin for the period 1977–82 found that each year 45 percent of all establishments experienced net employment gains, with an average net gain of 30 percent; 47 percent experienced net job losses, with an average net loss of 21 percent; and the remaining 8 percent maintained stable net employment levels.

The dynamic nature of the labor market is also evident in unemployment statistics. In November 1988, for example, the jobless rate was 5.3 percent, and 6.5 million workers were unemployed. The following month both of these statistics were essentially unchanged. On the surface this lack of change might seem to indicate a static labor market. Yet, out of the 6.5 million unemployed in November, 3.0 million had left unemployment by December. About half of them had found jobs; the other half had withdrawn from the labor force. In the same month, roughly 1.5 million previously employed workers became unemployed and 1.5 million people entered or reentered the labor force and began looking for work.

This continual reallocation of workers requires that labor markets be flexible and that workers be mobile. Studies estimate that the average worker holds more than 10 jobs in a lifetime. Survey data show that every year 10 percent of all workers change occupations. This number does not include the number of people who change jobs but remain in the same occupation. Only 1 out of 10 workers who change occupations does so because of layoffs. Most change occupations to earn higher pay or improve their working conditions.

Geographic mobility is an important aspect of labor market flexibility. The movement of workers out of agriculture and into manufacturing and services was accompanied by a major migration from rural to urban areas. Over the last two decades, the percentage of the population residing in the Northeast and Midwest has declined from 51.9 percent to 44.1 percent, reflecting a movement to the relatively fast-growing South and West.

The decline in the Northeast population share slowed during the 1980s, as strong growth in financial services, real estate, and other industries produced gains in per capita income in both New England and the mid-Atlantic States. Overall, about 6 percent of the population moves to a different county each year, and about 3 percent moves to a different State. This mobility of people within and between regions is an important reflection of and contributor to the economy's flexibility.

PRESERVING THE FLEXIBILITY OF THE ECONOMY

The dynamic nature of the U.S. economy and the value of flexibility have important implications for economic policy. *The incentives for firms to undertake innovation and investment are greatly affected by the overall macroeconomic environment, by the structure of taxation, and by legal rules governing the protection of intellectual property and product liability.*

To maintain a flexible and innovative economy, macroeconomic policy should seek to foster growth and predictability through credible and systematic monetary and fiscal policy. The tax structure should not erect barriers to saving, investment, or innovation. Product liability rules should protect consumers from product-related harm in ways that do not unduly discourage the introduction of new products. (These issues are discussed in more detail in Chapter 4 of the 1990 *Economic Report.*)

The Benefits of Economic Deregulation

Reduction in market flexibility is an important and often overlooked effect of regulation. When the Federal Government regulated airline routes and fares, one effect was that fares were generally too high. But another effect, which was not visible until the regulations were removed, was that regulation prevented airlines from developing efficient route networks. After deregulation the airlines evolved "hub-and-spoke" systems to channel passengers into airports where they could be connected more efficiently to their ultimate destinations. As a result, airlines operate more efficiently, and most travelers today have a greater range of flight choices at lower real prices. Similarly, telecommunications regulation had, and continues to have, adverse effects on innovation by restricting which firms may enter particular segments of the industry.

It is not coincidental or surprising that the adverse effects of regulation are often not perceived until after the regulation is removed. By its very nature, stifled change is difficult to detect. If unexploited technology is observed "sitting on the shelf," then one can investigate whether regulation is preventing its adoption. But it is impossible to know to what extent regulation, by preventing change, stifles the *incentive* even to develop new ways of doing things. It is therefore also impossible to know the extent of the lost opportunities.

There are inherent institutional reasons why government regulation tends to inhibit change. Regulation is a legal institution, and legal processes rely heavily on precedent. This reliance creates a bias in favor of the old and against the new. In addition, regulators face an extremely difficult problem: They are trying to make rules that constrain firms to act differently than they otherwise would. Regulators must do this knowing that the firms will always have better information about their costs, customers, and technology. Accomplishing the regulators' goals in a static world in which technology and institutions do not change would be hard enough, but it is harder still in a world of constant change in which the regulators will always lag behind the firms in understanding what is going on. For this reason, regulators have an incentive to prevent regulated markets from changing too rapidly.

These institutional biases against change inherent in government regulation do not mean that regulation is never desirable. Unregulated markets that generate serious pollution problems, have serious failures in the availability of information, or are inevitably served only by monopoly firms do not perform well. Regulation based on careful balancing of benefits and costs can sometimes improve performance in these markets. *Such regulation will, however, almost always impose some reduced flexibility.* In balancing the costs and benefits of government regulation, these costs of reduced flexibility should not be forgotten, even though they are subtle and difficult to quantify.

Government interference can also adversely affect the flexibility of labor markets. As discussed below, some States have responded to concerns about our educational system by increasing certification requirements for teachers. Unnecessary certification requirements create an artificial barrier that prevents qualified teachers from moving from one State to another or moving into teaching from other professions. In the long run, this barrier will increase the cost and decrease the effectiveness of education.

Adapting to Changes in Technology and Institutions

Failure to adapt longstanding government policies to a changing economy can be extremely costly. Regulation of railroads began in the 1890s, when they had a monopoly on the transportation of many goods. In the late 1970s, long after railroads had lost much of their business to trucks, regulation still treated them as monopolies, and partial regulation continues today. The decline of railroads when trucking developed was perhaps inevitable, but it was surely hastened by a regulatory regime that greatly limited the railroads' ability to compete. Similarly, regulation and other government policies in the banking and financial services sector have for decades failed to adapt to changing technology and market conditions, and reform is badly needed (Chapter 5).

Just as government regulation inhibits change in the affected markets, regulation is itself resistant to change. Once any regulatory regime is established, a constituency that benefits from it is created. No matter how out of date or counterproductive the regulatory regime becomes, that constituency is likely to resist efforts to change or end it. Therefore, it is to be expected that regulatory institutions will not adapt themselves well to changing circumstances, a tendency that should be considered when evaluating the long-run net benefits of deregulation.

Lowering International Barriers to Trade and Investment

In addition to being a driving force for change, free international trade can facilitate domestic adjustment to change. U.S. agricultural exports absorbed some of the increased output made possible by growth in agricultural productivity and thus cushioned the fall of agricultural employment. Further reductions in barriers to international agricultural trade would yield even greater benefits from high U.S. agricultural productivity.

The United States currently has a low rate of domestic saving by historical and international standards. The free flow of foreign capital into the United States has maintained domestic nonresidential investment (and ultimately productivity growth) at a level above that which domestic saving would support.

Thus international trade and investment flows provide an additional channel of flexibility to the economy. Administration efforts to reduce international barriers will further improve this flexibility (Chapter 7).

Cushioning the Effects of Change

Despite its benefits, economic change can impose short-term costs. Workers with obsolete skills and firms facing declining demand or using outmoded technologies face declining incomes. It is good social and economic policy to cushion such blows and to facilitate the retraining or retooling necessary to move such resources into other uses. But the government should not try to prevent change itself in order to mitigate its consequences. Such efforts are ultimately futile; they only serve to squander a portion of the beneficial effects of change and, cumulatively, to reduce the economy's flexibility.

This mistake is apparent in the farm policies of the United States, and, to an even greater extent, in those of Europe and Japan. Rapidly rising agricultural productivity, combined with relatively slow growth in the demand for food and other agricultural products, required that resources move out of the agricultural sector. The market signal for this needed reallocation is that farm incomes do not rise as fast as incomes in other sectors. Many aspects of farm policy have, however, attempted to squelch this signal by maintaining some farm prices and farm incomes at artificially high levels. Though farm policy has not ultimately succeeded in preventing a dramatic movement of labor out of agriculture, it has significantly reduced the benefits of agricultural productivity growth. If government policies that interfere with efficient allocation of agricultural resources were eliminated both in the United States and abroad, all nations would benefit from a more efficient worldwide agricultural sector.

Sometimes the economy must respond to changes that are *inherently* adverse. But if the initial shock is unavoidable, the government only makes things worse by preventing the economy from adapting to it. A good example of this policy mistake is the energy policy of the 1970s. When the Organization of Petroleum Exporting Countries raised the world price of oil in 1973, and when the Iranian revolution and Iran-Iraq war raised it again in 1979, the result was unquestionably damaging to the U.S. economy (Chapter 3). The urge to try to soften this blow by regulating the price of oil is understandable, but the result was the creation of artificial shortages and a delay in the adoption of energy-conserving technologies.

Integration with the world economy also generates the need for adjustments in labor markets. Increasing imports can lead to reduced employment in domestic industries, generating demands for government protection from the forces of change. Such protection can come in many forms, but the two most widespread are subsidies and trade barriers. The U.S. textile, machine tool, auto, and other industries have received trade protection at various times. Many European nations give enormous subsidies to their steel and shipbuilding sectors. *Subsidies and trade protection for declining industries are often a source of trade disputes among nations, but the strongest argument against protectionist policies is that they prevent the efficient movement of resources among sectors, both within and across nations.* The last decade has seen increasing awareness in many advanced economies that such policies are counterproductive. In Sweden, for example, subsidies to declining industries equaled 43 percent of manufacturing profits in 1977–78, but such subsidies have since been cut dramatically.

The economy as a whole benefits greatly if workers from industries subject to effective foreign competition are allowed to move to other sectors, but these moves are often painful for the workers involved. The decline of particular industries also creates problems for particular localities or regions that are heavily dependent on them.

Existing policies appropriately seek to mitigate these human costs and to facilitate retraining and reemployment, not to prevent labor market adjustments. The unemployment insurance system provides up to 26 weeks of income protection, and in some cases unemployed workers are eligible for extended benefits. A wide array of State and community-based programs for workers are provided through the Job Training Partnership Act. Such programs provide educational instruction, job training, counseling, and other support services.

These programs can be designed to enhance flexibility. For example, the transferability of unemployment benefits across States allows displaced workers to move to another State where opportunities may be better, without immediately losing benefits. Some States have experimented with combinations of job search assistance, job training, and the provision of a lump sum benefit either at the time of reemployment or to finance the startup of enterprises.

Ultimately, the most important thing that the government can do for workers in declining industries is to provide an environment conducive to the creation of new jobs elsewhere in the economy. Thus, these workers, too, are dependent upon government policy that fosters growth and maintains market flexibility.

SUMMARY

- The ability of the U.S. economy to change and evolve is one of its greatest strengths.
- Flexibility encourages innovation and increases its benefits, and raises living standards.
- Government policies can maximize the flexibility of the economy by forgoing unnecessary regulation, avoiding attempts to stymie the inevitable rise and fall of particular economic sectors, and removing barriers to innovation.

EDUCATION REFORM FOR AN ADAPTABLE WORK FORCE

A key determinant of the flexibility of the economy is the quality of its work force. Education raises skill levels that increase job performance and productivity. Well-educated workers have the basic skills necessary to adapt to the changing demands of a dynamic economy and are able to compete with their peers in other nations.

Unfortunately, primary and secondary education in this country does an inadequate job of producing such workers. Parental involvement and student dedication—especially to homework—is essential to the success of any school system. But greater parental and student effort alone cannot ensure success. Comprehensive reform of American elementary and secondary education is necessary.

The educational system should encourage innovation and promote excellence among teachers and students. It should strive to earn the same high reputation as the U.S. postsecondary educational system, in which there is significant diversity and choice. It should provide the foundation that enables workers to adapt and respond to changing workplace technologies and economic conditions. And it should provide all high school graduates with the backgrounds necessary for advanced study or entering the work force.

Many school districts have outstanding educational systems and achieve these goals. And in every school district in the Nation there are talented and dedicated teachers and administrators as well as concerned parents who work hard to improve the educational system. Success requires a commitment to excellence from school administrators, teachers, and parents as well as from students themselves. However, despite some successes, too many State and local educational systems are notably inflexible and resistant to meaningful and effective change. *Because they need not compete for students and are not held accountable for the quality of the education they provide, many State and local education agencies in this country have become entrenched bureaucracies.* As a result, U.S. students often receive unacceptably poor educations. Parents often find they have little power to ensure that their children receive a sound education, and many choose to send their children to private schools.

The primary fiscal responsibility for public education lies with State and local governments, which determine the institutional framework for the operation of the educational system. Local school boards and State education agencies determine who may teach, what schools students attend, how long students are in class, and even the general instructional methods that are adopted. The

Federal Government has traditionally provided only a small fraction of total support for education at the elementary and secondary levels; in 1988 it provided only 6.3 percent of the funds spent on education for kindergarten through grade 12.

As well-intentioned as school boards and education agencies may be, a system that is not required to compete for its students and is not judged by their performance is hard pressed to avoid the mediocrity and resist the insularity that comes with being the only "free" game in town. As a result, although the United States spends more money per pupil than almost any other country in the world (in 1989 U.S. per pupil expenditures were $5,172), the return on this substantial investment is unacceptably low.

THE CURRENT STATE OF EDUCATION

Evidence of the inadequacy of education in the United States can be found in the workplace and in the schools themselves.

Evidence from the Workplace

Today's high school graduate is often ill-prepared for the world of work. The 1990 National Assessment of Educational Progress, which reported the results of a nationwide test of students conducted between 1986 and 1988, found that only 6 percent of 17-year old students demonstrate the capacity to solve multistep problems and use basic algebra; only 8 percent have the ability to draw conclusions and infer relationships using scientific knowledge; and only 5 percent can synthesize and learn from specialized reading materials.

Firms are finding it increasingly necessary to develop remedial training programs in reading and mathematical skills; they spend an estimated $20 billion annually on such programs. Even institutions of higher learning are adapting their course offerings to reflect the poor preparation of many freshmen; the fraction of colleges offering remedial instruction has increased from 79 percent to more than 90 percent since 1980.

A second-rate educational system cannot support a first-rate, world-class economy. Workers unable to read and grasp complex concepts in mathematics and science cannot hope to adapt to changing technologies in the workplace. Poor training in mathematics and science at the elementary and secondary levels also contributes to declining trends in college enrollment in these areas. This pattern threatens the creative foundation needed to discover and introduce advances in technology.

Previous Reform Efforts

In 1983 a commission appointed by the Secretary of Education issued the report *A Nation at Risk*, which painted a bleak portrait of the quality of education in elementary and secondary schools in the United States. The report struck a responsive chord. Reacting to its recommendations and challenges, State and local educational systems embarked on plans to introduce fundamental changes.

It is nearly a decade later, and not much of consequence has changed. To be sure, many bills were introduced in State legislatures in response to the report, and many were passed. Forty-five States increased graduation requirements for core courses in subject areas such as mathematics, sciences, humanities, and social sciences. Many States also made teacher certification requirements much stricter and, in an effort to attract higher quality teachers, increased salary levels significantly. Teachers' salaries in public elementary and secondary schools increased by 18 percent in real terms between 1980 and 1990. Expenditures per pupil have also increased 28 percent in real terms since 1982.

Despite the efforts in the 1980s, there has been no noticeable change in the performance of the Nation's schools. Though students are taking more mathematics, science, and reading courses, test results show that no performance improvements have been made in these subject areas since the appearance of *A Nation at Risk*. The percentage of students graduating from high school remains unacceptably low, falling from 73 to 72 percent since the report's release.

International Comparisons

U.S. high school students consistently perform far below their foreign counterparts, especially in their knowledge of mathematics and science. In an assessment of learning in six major developed countries in 1988, U.S. students ranked last in mathematics and second to last in science. Even the best U.S. students do not compare favorably with foreign students. The International Assessment of Educational Progress found that a very select group of college-bound American students scored far below a less select group of Canadian students on a standardized test, and no better than an even broader group of Hungarian students.

Other indicators are also very telling. U.S. students spend an average of only 3½ hours a week on homework. That compares poorly with the 24 hours a week on average that high school seniors spend watching television. Studies show that European students spend far less time watching television and more time studying.

Finally, American students spend much less time in school than their foreign counterparts. Even though the American system of education is highly decentralized, the 180-day school calendar is nearly national in scope. School calendars ranged from 226 to 240 days in pre-unification West Germany. In Japan, schools are open 243 days on average. Some argue against lengthening the school year on the ground that it is the quality, not the quantity, of instruction that is at issue. Certainly, merely lengthening the school year is not the panacea for the ailing U.S. school system, but it is an issue deserving study and consideration by the States. Evidence suggests that *in countries with longer school years, more material is covered and at a much less hurried pace than in American classrooms.* Thus even in U.S. school systems that attain high standards of excellence, the quantity of educational material provided to students is not competitive by world standards.

TOWARD AN EFFECTIVE EDUCATIONAL SYSTEM

The Administration is fully committed to promoting excellence in the U.S. educational system and has undertaken significant initiatives to this end. In September 1989, the President convened a summit of cabinet officials and U.S. Governors to discuss the state of American education. Only the third such summit in American history, it was the first ever on education. As a result of this historic meeting, the President and the Governors agreed upon six clearly defined goals for the American educational system to reach by the year 2000:

- All children in America will start school ready to learn;
- The percentage of students graduating from high school will increase to at least 90 percent;
- Students will leave grades 4, 8, and 12 having demonstrated competency in challenging subject matter, including English, mathematics, science, history, and geography; and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy;
- U.S. students will be first in the world in science and mathematics achievement;
- Every adult American will be literate and possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship; and
- Every school in America will be free of drugs and violence and offer a disciplined environment conducive to learning.

The President outlined these goals in his 1990 State of the Union Address. In July 1990, the President issued *The National Education Goals: A Report to the Nation's Governors*, and the President and the Governors established a National Education Goals Panel that also includes participation of the congressional leadership. The panel will recommend a measurement and assessment system that will provide the Nation with information on the progress being made in reaching these goals.

To help ensure that all American children start school ready to learn, the Administration has significantly expanded the Head

Start program. And to ensure that the national education goals are achieved, the Administration will propose a new Educational Excellence Act. Initiatives in this important proposal would stimulate fundamental reform through promoting educational choice and alternative certification for teachers and principals, promote local control and innovation by providing increased flexibility in funding in exchange for greater accountability, reward schools that demonstrate improved achievement among students, and provide incentives for innovative approaches to mathematics and science education.

Programs of Choice

The U.S. public educational system must be opened to the invigorating and challenging forces of market competition by enabling teachers, parents, and students to choose their schools. Over time, the schools that survive will be the most innovative and effective institutions, those capable of responding to the changing educational needs of society.

Schools that must compete for students will work harder to deliver quality education. A school choice program can become the catalyst for greater diversity and help eliminate mediocrity in the educational system. An important step in this direction is the magnet school concept in which schools specialize in particular subject areas or interests—such as science, mathematics, or the performing arts—and students and their parents choose which school to attend.

The Administration has advocated adoption of choice programs in as many jurisdictions as possible across the country. There is no one "preferred" approach to educational choice. A statewide choice plan exists in Minnesota, while a choice demonstration plan including both public and private schools has been launched in Milwaukee, Wisconsin. In 1990 seven States adopted plans allowing various forms of choice. Before 1990 five other States had enacted interdistrict choice plans. The Administration's new Center for Choice in Education has been established to provide information and assistance to anyone interested in learning about or implementing educational choice.

A key to the success of a choice-based program is granting individual public schools the freedom to innovate. Schools must be freed from the grip of bureaucracies distant from the classroom. One popular version of this self-run school approach is to leave the governance of each school to a team composed of the principal, teachers, and parents. Such an arrangement creates a personal stake in the success of the school, rather than reliance on a central bureaucracy. It also provides parents and teachers an effective voice in determining how a school should change to attract students in an open-choice educational system.

Accountability

Unless teachers, school administrators, and elected or appointed officials are held accountable for the quality of the education they provide, the success of open-choice programs and self-run schools will be limited. Merely adopting new approaches does not ensure success. Schools and teachers must be held accountable for what their students learn.

To this end, *State and local education agencies must work together to develop and publish objective measures of the output of the educational system.* Meaningful performance measures are necessary for the success of school choice programs, allowing parents and students to leave choice programs that are failing. Such performance measures include basic competency tests for graduation from high school; annual tests to determine student progress; changes in high school drop-out rates; and high school transcripts that provide meaningful information on course content and student skills to parents, employers, and colleges.

At the Federal level, the Department of Education is charged by law to "collect, collate, and from time to time, report full and complete statistics on the condition of education in the United States." The National Center for Educational Statistics (NCES) has developed a series of national measures of the output of the educational system. The NCES publishes an annual digest of education statistics and periodically publishes the National Assessment of Educational Progress. The NCES publishes an annual selection of indicators on the condition of education in the United States. The 1990 report confirms the dismal state of public education in this country. Each of these reports provides an ongoing basis for parents to test the success of education reform; they are important tools for increasing accountability.

Alternative Teacher Certification Programs

Each State sets up standards that determine who can teach in public elementary or secondary school systems. Differences in certification requirements across States produce substantial limitations on teachers' job market options. Although many States have formal reciprocity agreements, teachers still encounter significant barriers when they try to cross a State line. Until recently, for example, to win a permanent teaching position in a Rhode Island school system, a person qualified to teach in Massachusetts was required to have a master's degree and 6 years of teaching experience, three of them in Rhode Island. This particular limitation is being eased somewhat, since the six New England States along with New York have agreed to accept the teaching credentials of applicants from other States in the region, providing they complete extra education requirements within 2 years.

Eliminating unnecessary barriers to entry into the teaching profession *within* each State is at least as important as eliminating the barriers between States. Most States currently require that an individual either graduate from a 4-year college as an education major or take a certain number of education courses before being allowed to teach. Talented individuals who decide to switch careers and become teachers find they have to complete either a traditional teacher preparation program or, under fairly recent reforms in some States, complete a graduate degree program in education.

While these requirements discourage many talented professionals seeking a career change from entering the teaching profession, they do not ensure that the school system is getting high-quality teachers. In fact, the poor academic performance of teachers in the subject areas they teach led many States to impose minimum grade requirements for education majors.

The solution to the problem of attracting talented teachers, however, is not to regulate the industry further but to open it up to the competitive process and to reduce certification requirements in ways that do not threaten but instead encourage excellence in teaching. Currently, 28 States have implemented some form of alternative teacher certification program. Mainly small pilot programs, these are based on the general principle that an individual with a bachelor's degree in a specific field of study can be a successful teacher, given some minimum level of training in education (Box 4–1). The minimum varies across States, but all programs reflect the belief that the minimum needed to guarantee quality is far less than that currently required by traditional certification routes.

It is important to recognize that removing unnecessary barriers to teaching does not threaten the stature of the profession. First, one already well-defined qualification for entry into the teaching profession, the acquisition of a 4-year college degree, will not change. Second, what helps promote respect for the teaching profession is effective teaching, not unnecessary certification requirements. The experience in Texas and in numerous other programs suggests that lowering the barriers to entering the teaching profession can improve the quality of primary and secondary education.

SUMMARY

- Public schools in the United States are failing to prepare students for either the world of work or higher education. This failure threatens the ability of the United States to maintain its leadership in the world economy.
- Competition and accountability are essential if schools are to innovate and improve the quality of education.

- Alternative certification programs can enhance the quality of education by removing unnecessary barriers to entry into the teaching profession.

Box 4-1.—Texas Alternative Certification Program

Starting with one school district in 1985, the Texas State school system has taken a national lead in introducing alternative teacher certification programs. The program is currently operating in nearly 20 percent of the State's school systems, and the number of teachers certified by the alternative route has grown from 276 in the first year to 1,241 in 1990. In a typical program, a candidate with a bachelor's degree takes 1 to 3 education courses, learning basic classroom management, along with disciplinary and evaluation skills. The candidate is then assigned to his or her own classroom for the year, receiving a first-year teacher's salary and a year of experience on the career ladder. Throughout the internship year, the candidate works closely with a mentor, often meeting on a daily basis for support and problem-solving. In addition, interns take other education courses throughout the year.

The alternative programs have been very successful in attracting highly qualified, diverse interns. In 1990, 30 percent of the interns were men and 52 percent were minorities, compared with traditional education programs, where 23 percent of the enrollees are men and 12 percent are minorities. Interns are older than the traditional education major: 90 percent are over 24, and 50 percent are over 30 years of age.

Evaluations of the program thus far suggest it is working very well. On State certification exams, interns do as well as or better than teachers who follow the traditional route. Studies show that teachers qualified by the alternative route are comparable in quality to teachers qualified through the traditional route.

AGRICULTURE: TECHNOLOGICAL SUCCESS AND THE NEED FOR MORE FLEXIBLE POLICIES

The agricultural sector illustrates dramatically both the tremendous dynamism of the U.S. economy and the costs of government policy that tries to inhibit change. Technological progress and the increased integration of world markets have transformed the U.S. farm sector, leading to growing production of wheat, corn, meats, and other products using a fraction of the labor force previously devoted to agriculture. At the same time, a complex structure of Federal farm policies has evolved that often inhibits the efficient use of agricultural resources. These programs impose significant costs on taxpayers, consumers, and the economy as a whole, thereby lessening the potential benefits of agricultural progress.

TECHNOLOGICAL CHANGE AND PRODUCTIVITY GROWTH

Technological innovation has been a driving force behind dramatic changes in both agricultural production and agriculture's role in the economy. *Many important technological changes in agriculture occurred in response to market signals.* The initial great surges in farm mechanization, for example, came in response to the farm labor shortages associated with the Civil War. The widespread adoption of mechanization allowed fewer workers to cultivate more land and facilitated agriculture's westward expansion. The advent of tractors around the close of World War I not only increased each worker's productivity, but also freed land from the production of food for draft animals.

The demands on farm output associated with World War II, coupled with increasingly limited opportunities to bring more land into production, provided the impetus for a new wave of technological innovations that increased the productivity of each unit of land and livestock. Following World War II, farmers increased crop yields greatly through the adoption of chemical fertilizers and pesticides, irrigation, and improved seed varieties such as hybrid corn. Corn yields per acre, for example, more than tripled from 1945 to 1990. Improved livestock breeds, artificial insemination, and greater feeding efficiency enhanced the productivity of the livestock sector as well. The average dairy cow produced almost three times as much milk in 1989 as in 1945.

In response to changing technology, the use of agricultural labor in 1989 was about one-fifth of what it had been a half century before, while the use of chemical inputs increased 16 times. Agricultural productivity per unit of all production inputs increased about two and one-half times between the 1930s and 1980s. Government has had a long and important role in supporting and disseminating agricultural research, but *innovations also come to the farm sector because private entrepreneurs are able to profit from them.*

What are the major implications of these dramatic changes in productivity? First, employment in farming fell rapidly as fewer and fewer farm workers were required to meet the food demands of the nonfarm sector. While this decrease means that farming has become much less representative of the American lifestyle—less than 3 percent of the American labor force is employed on the farm today, compared with 21 percent in 1930—it also means that *labor was freed from agriculture to contribute to the growth of other* *sectors*. Industries that emerged to support a more modern agriculture, such as financial institutions, farm equipment and fertilizer manufacturing and distribution, and food processing, were important new sources of employment.

Second, agricultural supply expanded faster than agricultural demand. Accordingly, real farm prices have trended downward in the United States since the Civil War. *The decline in agricultural prices contributed to the fact that American consumers now spend only about 16 percent of their disposable income on food—near the lowest in the world—and are among the best-nourished people in the world.*

CONSUMER DEMAND AND INTERNATIONAL TRADE

In addition to technology, other factors have been important sources of agricultural change. Changing consumer tastes and preferences have affected the relative profitability of alternative crops and products and reshaped the composition of agricultural production. The health-motivated interest in low-fat foods, for example, has contributed to the rapid growth in the production of poultry meat since 1980, while the output of other livestock products has been roughly constant.

Product Changes Within Agriculture

Consumer demand sometimes shifts in response to exposure to new agricultural products through international trade. Kiwi fruit, for example, entered the U.S. market relatively recently from New Zealand. Rapid consumer acceptance created the incentives for the development of a domestic industry, and U.S. kiwi production grew from an estimated 5,000 tons in 1980 to 40,000 tons in 1989.

Another demand-side factor with potentially large effects on the agricultural sector is the growing consumer concern with food safety and the environmental effects of chemical-intensive farm production techniques. Some trends in frontier research in biotechnology could help farmers respond to these consumer concerns. Bioengineered crop varieties that are resistant to diseases and pests are now emerging as proven technologies. Their adoption could ultimately reduce the intensity with which chemical inputs are used and again change the nature of agricultural production and the surrounding infrastructure.

Interaction with World Markets

One of the great benefits of productivity growth in U.S. agriculture has been the expansion of the supply of food and other agricultural products to countries all over the globe. Expanded trade, along with the direct transfer of agricultural technology to producers in other countries, has improved diets and living standards around the world. And, as U.S. agriculture has become more important to the world, trade has become more important to the economic performance of U.S. agriculture.

Agricultural exports increased sharply in the 1970s; during that decade the value of exports increased from about 12 percent to more than 25 percent of farm cash receipts. In the 1980s, total exports as a percent of production fell somewhat, but remained very high for key commodities. Depending on the year, anywhere from 40 percent to 80 percent of U.S. wheat production, for example, and 30 percent to 50 percent of soybeans were consumed in other countries.

The importance of exports to U.S. farm income—combined with adverse world market conditions and rising international tensions over agricultural trade barriers in the mid-1980s—encouraged the United States to put agriculture at the top of its list of priorities for the Uruguay Round of General Agreement on Tariffs and Trade negotiations (Chapter 7). *A successful conclusion to these trade talks, aimed at lowering barriers to agricultural trade worldwide, would help open foreign markets further to U.S. farm products.* In return, U.S. barriers to imports would come down as well, bringing the benefits of increased competition in agricultural products to the U.S. marketplace.

TOWARD A MARKET-ORIENTED FARM POLICY

The long-term decline in U.S. farm prices has been one of the great benefits of increasing productivity in agriculture. Farmers, though, fearing that lower prices would mean lower incomes, have sought and secured a significant degree of government assistance in keeping the prices they receive from falling. *Government agricultural policy, which partly insulates farmers from market forces, operates at the expense of consumers and taxpayers.* The sharp escalation of farm program costs in the mid-1980s, together with some of the adverse effects of inflexible farm programs, highlighted the need for policy reforms.

The Costs of Failing to Accommodate Market Forces

Government farm programs consist principally of two types of subsidies: direct payments, financed by taxpayers; and programs that hold farm prices above free-market levels, paid for by consumers at the grocery store. At their peak in 1986, Federal subsidies of both types to U.S. producers of wheat, rice, feed grains, sugar, milk, and beef were valued at almost $27 billion—that is an average of $12,000 for *each* U.S. farm, although many farms receive no subsidies.

One recent study estimated that economy-wide income would have been roughly $9 billion higher in 1987 in the absence of these subsidies. In other words, the benefits to consumers and taxpayers of allowing the market to allocate agricultural resources would have outweighed the loss of farm subsidies to producers by $9 billion.

It is also instructive to examine some of the problems caused by specific policy measures designed to counteract market signals. A key component of U.S. agricultural policy is the provision of price floors for major commodities. Prices of wheat, feed grains, soybeans, rice, and cotton are held above the floor by allowing farmers, or sometimes other farm product suppliers, to pledge their crops as collateral to the government in exchange for a loan. Pledged crops are valued at the legislated support price. By putting their crop "under loan" when the market price is below the support price, suppliers remove some portion of the current crop from the market, which helps pull the market price back up toward the support price. Should the market price rise above the support price, crops under loan may be redeemed from the government and offered to the market. If not redeemed by loan repayment, the government acquires the crop collateral and the crop is said to have been "forfeited."

The prices of sugar, milk, and several other commodities are also maintained above legislated price floors. A combination of government purchases of dairy products—including cheese, butter, and nonfat dry milk—and restrictions on the quantities of these products that can be imported is used to support milk prices to dairy farmers, for instance. (The sugar support system is discussed in Chapter 7.) Under each of these programs, farmers are guaranteed at least the support price—regardless of supply and demand conditions.

A system of Federal regulations called "marketing orders" sets minimum prices for about 80 percent of fluid milk sales; 45 other marketing orders place restrictions on the quality or the quantity sold of various fruits, vegetables, nuts, and specialty crops. Milk orders reduce competition, and studies have shown that they raise retail milk prices. Orders that merely enforce minimum grade, size, and maturity standards can also interfere with competition, and can affect consumer choices and prices by removing some product from the market. The kiwi fruit order, for example, which began in 1984, after U.S. kiwi production had begun to expand, puts size and grade requirements on kiwis grown in California. The 1990 farm legislation extends the same requirements to kiwi imports. These requirements may well inhibit competition in a market that did not even exist until imports created it.

Over time, policymakers have learned that when support prices for export crops are set too high, U.S. commodities accumulate in government warehouses, while other countries benefit from the absence of U.S. competition. Foreign farmers expand production and their share of the export market at the expense of the United

States. The high wheat support prices set in the 1981 farm legislation have often been cited as one reason for the sharp drop in U.S. wheat exports and the large buildup in government-held stocks during the early to mid-1980s. Support prices for wheat and other exported commodities were lowered in 1985 legislation, but policymakers have not had this same incentive to lower the price floors for commodities subject to competition from imports, such as dairy products and sugar.

"Deficiency" payments are another major component of farm programs. They are paid to qualifying wheat, feed grains, rice, and cotton producers and are based on a "target" price, which is set higher than the support price for these crops. Each qualifying farmer receives a check from the government in an amount equal to the difference between the legislated target price and the market price or support price, whichever is higher, multiplied by qualifying production.

These deficiency payments are made in proportion to a farmer's crop acreage. As a result, *the distribution of deficiency payments is dramatically skewed toward large, often wealthy farmers.* In 1988, for example, more than 40 percent of direct payments, which include deficiency payments and a smaller amount of some other payment types, went to fewer than 4 percent of all farms. These farms averaged almost $62,000 in payments, almost $100,000 in net cash farm incomes, and more than $800,000 in net farm worth. Furthermore, *the incentive to overproduce provided by a target price set well above the market price requires offsetting measures to control program costs, such as requiring farmers to take land out of production.* Farmers thus have been required over the years to cede some of their production decisions to the government.

1990 Farm Legislation

In recent decades, farm legislation has been written often, but each law has retained the general structure of the original 1930s legislation. The 1985 legislation introduced important market-oriented reforms, such as more flexible approaches to determining support prices for exported commodities. Support prices for most program commodities began to be based on a 5-year moving average of market prices, rather than being set independently of price trends. U.S. farm exports performed considerably better after this change.

The most significant change of the 1990 farm legislation, the Food, Agriculture, Conservation, and Trade Act of 1990, in conjunction with the Budget Reconciliation Act, is the "triple-base" provision, which extends increased planting flexibility to farm program participants while reducing the acreage qualifying for deficiency payments. This planting flexibility provision (explained in Box 4-2) makes market prices more important to production decisions. It will thus help reverse the longstanding tendency of farmers to overproduce crops whose target prices are set above market prices. Two particularly important outcomes are likely. First, the production of existing and potentially profitable alternative crops that do not qualify for deficiency payments, such as soybeans and other oilseeds, can now expand. Second, environmentally sound crop-rotation practices might be encouraged in some agricultural regions where substitute crops are available or are likely to be introduced.

Box 4-2.—How the "Triple-Base" Provision Works

Every year the government assigns farmers an "acreage base" and a "payment yield" for each program crop, such as corn, historically planted on the farm. Under the 1985 farm bill, a farmer could receive deficiency payments for producing corn only if some portion of the corn acreage base was put into a conserving use and not planted to corn. Deficiency payments were not made on this idled, or conserved, acreage, and the farmer could incur penalties for planting certain crops, such as soybeans, on it.

The 1990 farm legislation added to the deficiency payment acres and conservation acres *a third category that does not qualify for deficiency payments, but that may be planted to any crop except fruits and vegetables*. The bill set this third category—the flexible acres—at 15 percent of the base acreage.

By disallowing deficiency payments on this 15 percent, the flexibility provision reduces government outlays. Farmers can, however, offset some of the lost subsidy by planting crops with the greatest market returns on the triple-base acreage. Therefore, the provision makes market signals more important to farm production decisions.

The flexibility provisions of the 1990 legislation also create considerable taxpayer savings, as farm subsidies are eliminated on 15 percent of the farm program acreage base. This change is projected to save about $7 billion over 5 years and is an important component of the overall deficit reduction package. However, while reducing deficiency payments and increasing the importance of market prices in farm production decisions, the 1990 farm legislation retains high and rigid price supports for dairy products and sugar and continues extensive government management of some markets, such as peanuts. While the Administration applauds the move toward increased flexibility that the 1990 farm legislation represents, continued efforts to reduce distortions created by farm policy are desirable.

SUMMARY

- A series of technological revolutions has dramatically increased the productivity of agriculture, freeing labor from agriculture, lowering the cost of farm products, and enhancing the prosperity of the economy.
- Productivity growth also facilitated a tremendous increase in agricultural exports, linking the future of U.S. agriculture to the openness and growth of world agricultural markets.
- U.S. agricultural policy, as evidenced by 1990 farm legislation, is gradually being changed so that agriculture is more able to respond to market signals, but further reforms are necessary to reduce the distortions created by farm policy and the burden of farm support on consumers and taxpayers.

HEALTH CARE: DYNAMIC TECHNOLOGY AND CHANGING DEMOGRAPHICS

Health care has been one of the fastest growing and most innovative sectors of the U.S. economy during the last three decades. Although many factors have contributed to the rapid pace of change, the fundamental driving forces have been technological advances and shifts in the demographic makeup of the population. These forces, along with the lack of market incentives for cost-conscious behavior, have resulted in escalating costs and much concern about lack of access to health care for many Americans—particularly the 33 million people who lack health insurance coverage. While government programs finance care for many of the poor and elderly, increasing government involvement in the health care financing system has aggravated the problems of cost and access.

RECENT TRENDS

The most dramatic illustration of the growing importance of the health sector is its rising share of GNP. In 1960, health care accounted for 5.3 percent of GNP; its share rose to 11.6 percent in 1989. To put those numbers in perspective, total health care spending in 1989 was twice as large as Federal spending on defense, and more than six times larger than the value of U.S. farm output.

The growing share of health care in the U.S. GNP can be traced to developments on both the supply and demand sides of the health care market. On the supply side, technological advances have made possible a vast array of medical treatments unheard of even a decade ago. Developments in diagnostic equipment and pharmaceuticals, for example, have promoted earlier and more successful treatment of many diseases. Much of this technology, however, is costly. Therefore, while technological advance has undoubtedly improved the quality of treatment received, it has simultaneously made that treatment more expensive.

On the demand side, economic growth favors health care expenditures. As incomes rise, people tend to attach more importance to trying to live longer and healthier lives. Most advanced economies have experienced increases in the share of resources devoted to health over time.

In addition to technological advances and economic growth, health costs have increased because of the aging of the population. Older individuals incur more health expenditures, on average, than the young or middle-aged. The percentage of Americans aged 65 and older rose from 9.2 percent in 1960 to a projected 12.6 percent in 1990, representing an increase of 14.9 million older Americans. During this period, life expectancy rose by more than 5 years and infant mortality rates declined by 63 percent. *These statistics indicate that increases in the amount of resources devoted to health are not necessarily bad, since to a large extent they represent an investment in health, the changing preferences of a wealthier society, and the extra cost of a longer lived population.*

Table 4-1 shows that the aging of the population will continue to exert a large influence on the health care system for several decades. Even without above-average increases in medical prices, the rise in the elderly population means that the United States will pay much more for health care in the coming decades unless dramatic developments occur that reduce costs.

TABLE 4-1.— *Aging of the U.S. Population, 1960-2040*

July	Population (millions of persons)		Age 65 and over as percent of total population
	Total	Age 65 and over	
1960	180.7	16.7	9.2
1980	227.8	25.7	11.3
2000[1]	268.3	34.9	13.0
2020[1]	294.4	52.1	17.7
2040[1]	301.8	68.1	22.6

[1] Middle series projection, January 1989.

Note.—Includes Armed Forces overseas.

Source: Department of Commerce, Bureau of the Census.

PERCEIVED PROBLEMS OF THE EXISTING SYSTEM

Despite the beneficial effects of much spending on health care, there is a general perception that the U.S. health care system should perform better than it does. Costs are seen to be out of control, and millions of households do not have health insurance and are perceived to have inadequate access to care.

Rising Government Health Care Costs

Health care costs paid by Federal, State, and local governments have exploded. The combined total spent by all levels of government on health care rose from $28.1 billion in 1960 (in 1989 dollars) to $253.3 billion in 1989 and is expected to continue to rise. These escalating costs place great stress on the ability of governments to fund current and future liabilities in health care.

Medicare, the principal program for providing medical care to the elderly and disabled, illustrates the changes in government spending on health. Medicare expenditures were $17.6 billion (in 1989 dollars) in 1967, the first full year of the program, and 19.5 million people were enrolled. By 1989 the Federal Government was spending $100 billion on medicare, and 33.6 million elderly and disabled Americans were enrolled. *The enormous increase in outlays for medicare can be traced to the increase in the number of people covered by the program, general increases in medical care expenses, and the increased share of program costs borne by the Federal Government.* For example, the Federal Government originally shared equally with enrollees the cost of covered physician services, but in recent years beneficiaries have paid only 25 percent of the cost. Even when all benefits and patient payments are included, the Federal Government pays out $3 for every $1 spent by medicare patients.

Medicaid, the program that funds health care for some of the poor, illustrates the effect of changing demographics on both the type of care received and increasing government costs. Started in 1965, medicaid was initially designed as a joint Federal/State program to provide health care for women and children receiving welfare payments and the disabled. Medicaid eligibility has expanded in recent years, but even today it is not designed to provide medical care for all poor Americans. Total medicaid expenditures in 1967 were only $7.6 billion (in 1989 dollars). In 1989, the Federal Government financed 57 percent of a total medicaid bill of $59.3 billion.

The most significant trend in recent years has been the increase in medicaid spending on nursing-home care for the elderly. Spending on long-term care for the elderly accounted for about 25 percent of all medicaid spending in 1989. As the number of elderly citizens continues to rise, the costs of long-term care will also increase.

Health Care Price Inflation

Rapid increases in the real price of health care have contributed to the overall rise in health care spending. From 1980 to 1989 the price index for medical care rose by 99 percent, twice as fast as the average for all goods and services, though difficulties in measuring the inflation rate in technologically dynamic sectors suggest that the real difference in inflation rates was probably somewhat less. Those rapid price increases, combined with growth in the volume of services demanded, raised total health care expenses.

The health care sector has responded to cost escalation in several innovative ways. One of the most significant changes is the growth in health maintenance organizations (HMOs) and preferred provider organizations (PPOs). HMOs charge a fixed annual fee for medical services, rather than a separate fee for each service provided. In a PPO, a group of providers negotiates prices and patient volume with a large health care purchaser, such as an insurance company or employer. Through their greater potential for supplying cost-effective care, HMOs and PPOs provide competitive alternatives to traditional fee-for-service insurance policies. The rapid growth of HMOs and PPOs illustrates both the important role of competition and the ability of the health care sector to respond innovatively to the challenge of cost escalation.

The Medically Uninsured

One of the most critical deficiencies of the U.S. health care delivery system is the large number of people who lack health insurance. Although estimates vary, *recent calculations place the number of uninsured Americans at around 33 million.* Because the very poor are usually covered by government programs such as medicaid, many of the uninsured are employed workers or children and spouses of workers. They may lack insurance coverage because their employers cannot afford to offer it, they cannot afford to purchase it on their own, and they do not qualify for government-subsidized programs.

Many of the uninsured are not poor; 39 percent of uninsured Americans have incomes more than twice the official poverty level. Many young, healthy workers prefer not to purchase insurance when given a choice, since the cost of a policy outweighs its perceived benefits. To a great extent, the lack of access to health care or affordable insurance is due to the increase in health care costs during the last few decades.

Two policies enacted in 1990 will help to protect families particularly at risk from lack of insurance. Low and moderate income families will receive a tax credit covering part of the cost of purchasing medical insurance covering the whole family rather than just obtaining single coverage for the worker. In addition, medicaid coverage was extended to all pregnant women and children up to age 6 in families with incomes below 133 percent of the poverty line. The Administration's new infant mortality initiative and its proposed expansion of the Special Supplemental Food Program for Women, Infants, and Children, along with a variety of initiatives emphasizing preventive care, will further enhance the health of low-income families.

WHY HEALTH CARE MARKETS PERFORM POORLY

Why is the health care sector able to perform so well in meeting certain demands yet unable to control costs or provide adequate services to all who need them? The institutional structure of the U.S. health care delivery system and the poor incentives for cost control it provides are at least partially to blame.

Health Insurance and "Third-Party Payments"

The most important institutional feature of the existing system is the prevalence of Federal or private insurance policies. People purchase insurance because they want to be protected from the costs of accidents, fire, or, in the case of health insurance, disease and sickness. But one consequence of insurance coverage is that those who are protected from harm by an insurance policy have less reason to take actions to reduce the probability that any harm will occur.

When harm does occur, consumers covered by insurance face diminished incentives to minimize the cost of care, since someone else pays the bills. The effect of insurance generally to diminish the incentive to minimize cost is called moral hazard (Box 4–3). In the context of health care, insurance provides an incentive to increase the quantity of services consumed, since the patient does not pay the full cost of additional services.

Federal and private insurance distorts consumer incentives to a large and increasing extent. In 1970, patients paid 41 percent of the costs of their care out-of-pocket. By 1989, that percentage had fallen to 24 percent. Increasingly, health care expenses are paid by third-party payers, primarily the government and insurance companies. Although ultimately the cost of care must be paid by recipients (in the case of private insurers) or taxpayers (in the case of Federal insurance), consumers of medical treatment who have insurance do not generally need to be concerned *at the margin* about either the cost of the services they receive or even whether those services are necessary or cost-effective. Consequently, unlike most markets for goods and services, *medical care does not have built-in incentives to equate costs and benefits at the margin.*

Health insurance differs from fire or auto insurance in the extent to which its structure creates incentive problems. Until recently, health insurance has tended to cover more and more of the care received by patients. For example, many policies have small deductibles, so that patients do not have to pay for even routine care, such as a physical exam or treatment for a sore throat. This type of "first-dollar coverage," as it is called, is analogous to homeowners' insurance that would pay not only for the damage caused

Box 4-3.—Incentives in the Market for Health Insurance

One of the most important issues that arise in examining the mounting cost of health care in the United States is the extent to which the widespread use of insurance distorts incentives to make cost-effective choices. In health care and other markets, insurance coverage reduces the incentive to balance costs and benefits at the margin because the consumer does not pay the full cost of the treatment. This phenomenon, called *moral hazard*, is common to all insurance markets. Using health care as an example, consider the situation confronting an insured consumer who visits a physician. If the insurance policy pays 80 percent of the cost of treatment, the price *to the consumer* of care costing $100 is only $20. Therefore, the consumer would purchase the treatment even though he may value it at less than $100. Alternatively, if the consumer could prevent the need for treatment by spending $40, he may not do so because his cost would exceed his savings of $20, even though the true savings is $100.

Thus, insurance coverage creates a gap between the price paid by the consumer and the cost of providing care, so that the choice made is inefficient. The health sector has responded to the moral hazard problem in several ways. The most direct response is to place restrictions on the care that is reimbursed by increasing the deductible. Larger deductibles force the consumer to pay the full price of treatment for relatively low-cost care, at least until the deductible is reached. That is an effective way to encourage the consumer to make cost-conscious choices and thus reduce the overall cost of health care for the average consumer.

A second approach to reducing moral hazard is to encourage the physician to make efficient choices. That is one goal of health maintenance organizations and other *capitated systems* in which care providers are paid a fixed amount per policy, regardless of the amount of care provided. The physician, therefore, has no incentive to provide excessive care. In fact, providers in capitated systems may face incentives to save money by providing less than the needed amount of care. In HMOs, however, care decisions are most often made by salaried physicians who do not have a direct economic stake in the amount of care provided. Professional standards and concern for the reputations of individual capitated systems further enhance the physician's incentives to balance the costs and benefits of treatments.

by a house fire, but also for a burnt pan caused by leaving the stove on too long. The analogy in auto insurance would be a policy that paid not only for damages resulting from moving accidents, but also for paint chipped when a car is scraped in a parking lot by another car's opening door. The cost of such policies would be much higher than typical home or auto policies.

Government Regulation

Government regulations, especially those that require insurers to provide specific benefits, have a large effect on the cost of health insurance. Health insurance policies are regulated by the States, and every State requires that insurance companies doing business in their State include certain benefits. *That means that it is illegal for an insurance company to offer a bare-bones, low-cost insurance policy to consumers who only want to insure against catastrophic accidents or illnesses.* The States instead require that virtually all consumers purchase coverage for a package of treatments that varies from State to State. The required benefits can include maternity care, alcoholism and drug abuse treatment, mental health care, chiropractors, and assorted other treatments, regardless of the consumer's willingness to pay for such coverage.

These requirements raise the cost of health insurance and make it too expensive for many individuals and firms. As a result, many individuals who would willingly purchase low-cost insurance against catastrophic illness are not allowed to do so. A recent study estimated that as many as one-fourth of the uninsured, or more than 9 million people, lack health insurance because of the high cost of policies due to State regulations.

Another effect of government involvement in financing health costs occurs through the means-testing of the medicaid program. To target benefits at the poor, income limitations are set to restrict eligibility. If earnings exceed the maximum allowed, all benefits are taken away. (Medicaid availability is also affected by participation in other means-tested programs, particularly aid to families with dependent children.) For low-income families, this loss of medicaid eligibility can create a large penalty for employment, since medical benefits potentially worth thousands of dollars, as well as peace of mind, can be lost if replacement health insurance is unavailable.

Employer-Based Insurance and Tax-Free Health Benefits

One fundamental characteristic of the U.S. private health insurance system is that it is predominantly employer-based; that is, most Americans with health insurance obtain it through their employer. Providing insurance through employment is a natural mechanism for achieving the risk-sharing benefits of insurance.

Economies in administrative, sales, and purchase costs also enhance the desirability of employer-based group insurance.

By covering everyone in a large group, insurers avoid the problem of "adverse selection," which occurs because those most likely to need expensive care, such as the chronically ill, are also the most likely to seek insurance. However, these advantages pertain primarily to large employers. Small firms are less likely to offer insurance if they have employees particularly likely to need care, and the economies in administrative expenses are much reduced for small groups. Firms with fewer than 50 workers incur administrative costs of about 25 to 40 percent of total claims, versus only 5.5 percent for firms with 10,000 or more employees.

Typically, health insurance is not only organized in the workplace, it is largely paid for by employers, although much of the cost may be shifted back to workers in the form of wages lower than they would otherwise earn. On average, employers pay about 90 percent of the premium for single workers and 75 percent of the cost of family coverage. This practice makes sense for firms and workers because the cost of employer-provided health insurance is tax-deductible for firms, and workers do not pay income or payroll tax on these benefits.

The tax treatment of employer-provided insurance means that taxpayers subsidize the provision of health insurance to workers. As a result, incentives are not only distorted by the existence of insurance, but individuals are also induced to carry more insurance than they would if they faced its true cost. *Thus employees tend to demand both more health insurance and more health care than they would if they had to pay the full price.* The increased demand for health care drives up the average price, if there is no offsetting rise in the supply of care made available.

The financing and regulation of the health care sector thus combine to reduce significantly the flexibility of health care markets. *Fundamentally, consumers do not have adequate incentives to avoid services that are too expensive, and providers who are not cost-efficient are not disciplined by the market.* Without these incentives, markets cannot function well. Health care reform, designed to control the rate of cost increase and improve health care access, must confront the problem of creating appropriate incentives for health care consumers and providers.

SUMMARY

- The health care sector grew rapidly during the last three decades due to advances in technology, the aging of the U.S. population, and increased government financing of health care expenses.

- Many of the inefficiencies in health care are attributable to the dilution of market incentives and the reduction in market flexibility created by third-party payments and government-mandated benefits.
- Health care policy reform will not be successful unless it improves the incentives for health care consumers and providers to balance costs and benefits.

TELECOMMUNICATIONS: TECHNOLOGICAL AND REGULATORY INNOVATION

The telecommunications industry, like the health care industry, has been undergoing particularly rapid change. As few as a dozen years ago, it consisted almost entirely of regulated service providers and dominant equipment providers with substantial market power; today, much of the regulation has been removed and competition is vigorous in many of its component markets. Deregulation is a natural experiment that demonstrates the benefits of increased flexibility and the hidden costs of regulation. Because the crucial local telephone exchange segment of the industry will remain regulated for the foreseeable future, careful thinking is required to design its regulation to minimize those hidden costs.

LESSONS FROM DEREGULATION

Deregulation of telecommunications began with Federal Communications Commission (FCC) and judicial decisions of the 1950s, 1960s, and 1970s. It continued with the breakup of American Telephone and Telegraph (AT&T) in the early 1980s, the passage of The Cable Communications Policy Act of 1984 (the 1984 Cable Act), and further deregulatory decisions in the 1980s. These policy changes helped transform the telecommunications industry from a structure dominated by regulated monopolies into one in which several deregulated competitive sectors coexist with a remaining regulated monopoly component. Both the difficulty of bringing about this transition and the benefits that it has generated provide lessons about government regulation and market flexibility.

Adapting to Changing Circumstances

The early history of the telecommunications sector was characterized by extensive competition. In the period following the expiration of Alexander Graham Bell's original patents in 1893 and 1894, many new firms entered the telephone business, eroding the monopoly held by AT&T, which had evolved from Bell's original company. By 1907, 49 percent of installed telephones were controlled by non-Bell companies, and most Bell operating subsidiaries faced some direct competition.

AT&T then adopted an explicit strategy of reducing competition through mergers and acquisitions and willingly accepting regulation, both to exclude competitors legally and also to blunt public criticism of monopoly. By 1932 Bell's market share had returned to 79 percent, and direct competition had been virtually eliminated. With the passage of The Communications Act of 1934, the regulated monopoly structure of the telephone system was completed. In 1970 AT&T controlled 95 percent of local and long-distance telephone revenues, and its Western Electric manufacturing subsidiary provided almost all of Bell's equipment needs.

Changing technology eventually made this monopoly regime unsustainable. As early as the 1950s, other companies sought permission to sell types of telephone equipment that AT&T did not produce. The development of economical microwave transmission technology made competition for long-distance telephone service feasible, and the FCC permitted a competitor to enter this market in a limited way in 1969. The completely regulated monopoly structure of the telecommunications industry might have made sense in 1930, but by the 1970s it clearly was incompatible with the new state of technology. Competition, not regulated monopoly, emerged as the appropriate policy for the equipment and long-distance components of the telephone industry.

The history of the cable television segment of the industry offers the same lesson. In the 1960s, cable TV provided television to remote areas that could not receive standard broadcast signals. Cable TV operators clearly had a monopoly over an important segment of the entertainment market in these areas, and the widespread practice by State and local governments of regulating cable TV rates developed in this era. Later, cable evolved in many areas into an alternative to "over-the-air" TV, and it also faced increasing competition in the broader entertainment market from direct satellite broadcasts and widely available videocassette rentals. Regulation of cable TV rates persisted, however, until the 1984 Cable Act deregulated them except in areas with limited broadcast competition. Again, policy had to change to recognize the change in the underlying industry conditions.

Thus, in telephone equipment, cable TV, and long-distance telephone service, a regulatory regime appropriate to a technology at one stage gave way, slowly and reluctantly, to new policy appropriate to new technological realities. Of course, the evolution of telecommunications regulation is not over. Today, local telephone service remains largely a regulated monopoly, because it does not make economic sense for more than one company in an area to build a complete system of copper wires, fiber optic cables, and switches connecting all customers. That too could change if, for example, radio technology developed that was competitive with the wired system for nonmobile communications. More likely, technological developments that cannot yet be anticipated will change the nature of the industry in ways that will make the current regulatory structure obsolete.

Unanticipated Benefits of Deregulation

Deregulation and the ensuing competition in the markets for telecommunications equipment and long-distance service facilitated development of products and services that did not exist before. The development of the facsimile (fax) machine in different versions offered by many different companies could not have occurred if telephone equipment had remained regulated. In addition to the fax, an enormous variety of portable telephones, answering machines, and computers with built-in communication abilities have all emerged in the deregulated equipment market.

New services have also been introduced, based both on new technologies and new arrangements that were either not permitted or not conceived of under regulation. Today, cellular technology has taken mobile telephones from the realm of spy-movies and given them to 4.4 million subscribers. Long-distance competition has reduced the cost and expanded the range of "800" and "900" number services available to businesses, thereby increasing the flexibility with which they reach their customers and suppliers. Combined with deregulation of the surface freight industry, the fax machine, electronic data interchange, and other new communications technologies are changing the way firms organize the distribution networks that connect their factories, stores, and customers. Some of these changes were anticipated when deregulation was contemplated, but most were not.

MAINTAINING A DYNAMIC INDUSTRY

The policy framework that will ultimately replace the old framework of near-total regulation is still emerging. Ahead are a number of policy choices that offer opportunities to increase the benefits of deregulation. The principle of designing government policy to foster flexibility is crucial in order to ensure that the United States has the most effective telecommunications infrastructure possible.

Maximizing the Scope for Competition

In several markets in the telecommunications sector, current policy *inhibits* competition. Cable TV operators are subject to competition from other media, but in most cases State or local governments grant a franchise to a single cable operator in a given area, preventing operators from competing with each other for customers. Local telephone companies are also prohibited by law from acting as cable operators. These restrictions reduce the power of competition to discipline cable prices and services and give cable operators inadequate incentives to adopt the latest technology.

The FCC and many States also continue to regulate AT&T's long-distance rates, despite the presence of competition in these markets. This vestige of an earlier era now serves primarily to inhibit competition.

Another area in which government policy could further recognize the potential for competition is in the management of the electromagnetic spectrum. The spectrum consists of the range of frequencies in which radio-based technologies such as broadcast television and radio, cellular telephone, and microwave transmissions operate. The range of frequencies with desirable technical properties is limited and therefore is a scarce resource that must be allocated efficiently.

The FCC allocates particular "bands" of frequency to specific uses and then assigns the right to operate in these bands to specific private parties. Assignment and allocation of spectrum bands require administrative hearings that can be very cumbersome and time-consuming. As a result, competition among technologies and among different firms seeking to operate a given technology is greatly reduced.

Without the force of competition, spectrum bands are not necessarily used in ways that generate the greatest social value. The invention of new technologies is stifled because of the inability to get access to the spectrum, and there is an inadequate incentive to refine existing technologies to conserve the amount of spectrum used. If instead of assigning spectrum rights administratively, the Federal Government auctioned them to the highest bidder and permitted their sale and reassignment, the flexibility of the telecommunications sector would be greatly increased. *In particular, when portions of the spectrum previously reserved for government use are made available to the private sector, they should be auctioned off without restrictions on resale.* The resulting competition would likely lower prices and increase the diversity of available service offerings for over-the-air communications and broadcast media generally.

The government also limits competition by restricting the entry of the regulated local telephone companies into unregulated businesses. Under the terms of the consent decree governing the breakup of AT&T, local operating companies are not allowed to manufacture telephone equipment, offer various information services, or provide most long-distance service.

It might appear that keeping these particular firms out of these businesses would not have serious costs so long as other firms are free to enter. The government, however, has no way to determine who the most qualified or most advanced potential competitor might be. Further, there are reasons to believe that the local telephone companies might have much to offer these other markets. Experience developed in the construction or operation of the hardware and software for the telephone system itself could be very valuable in developing information services for sale to customers. *These and other potential "economies of scope" between the local exchange and other markets are limited or lost when the telephone companies are barred from related businesses.* The lesson from easing previous restrictions is that increased competition produces additional benefits that cannot be foreseen today.

These restrictions reflect a concern that local telephone companies would have unfair advantages in competing against others in markets that are somehow connected to the local exchange. For example, the local telephone companies might try to hide some of the costs of their competitive activities within the regulated local exchange sector, thereby transferring the costs to the local ratepayers. They might also exploit their knowledge of the technical details of the local network, or even design the configuration of the network in ways that favor their product offerings in the related competitive businesses.

These are real concerns that must be addressed. If the local telephone companies are permitted to compete, regulators will need to scrutinize their activities to prevent ratepayers from subsidizing the competitive businesses and to ensure that the regulated firms do not unfairly exploit their monopoly position. Monitoring of regulated firms competing in unregulated markets will be imperfect, and it will not be a costless process. But regulators have developed better monitoring tools than they previously had, and the alternative is the extreme option of banning firms from participating in related businesses without even attempting to make competition work.

The principle that the government should not decide what activities within an industry particular firms may perform also applies to the development, ownership, and syndication of programming for broadcast and cable television. Government restrictions on ownership, carriage, or syndication of programming inhibit competition, reduce efficiency, and are generally an ineffective means of addressing any problems of market power that may exist in these markets.

Regulatory Approaches that Encourage Innovation

Traditionally, monopolies are regulated by what is called cost-of-service regulation. Regulators determine the total costs incurred by the monopolist in providing the regulated services and then set prices designed to recover those costs, including a competitive rate of return on the capital invested in the regulated company. This method is intended to ensure that the company will not lose money, but also that it will not be able to charge prices in excess of its costs.

The fundamental problem with this approach is that a firm subject to cost-of-service regulation has limited incentives to reduce its costs or improve its services. A reduction in costs will eventually be translated into a reduction in allowed revenues, leaving the firm no better off. If improved products lead to a rise in profits, prices will eventually be reduced by regulation to bring revenues and costs back into line. Again, the benefit to the firm has been reduced. A firm presented with these incentives will not seek change and innovation as aggressively as one that is able to retain the profit from doing so.

Recently, economists and regulators have become interested in developing forms of regulation that would prevent abuses of monopoly power while preserving incentives for innovation. These approaches are often referred to loosely as "*incentive regulation.*" All forms of incentive regulation are designed to preserve the overall or long-run relationship between prices and costs but to sever or limit that relationship in the short run or for specific investments. In other words, if a firm reduces its costs or improves its products, it would be permitted to keep some of the profit that the innovation generates.

The key to maintaining the incentive to innovate is to tie the regulated firm's price level to some overall or general indicator of costs, rather than to actual costs incurred. For example, prices could be allowed to rise each year by the rate of inflation, minus a fixed percentage reflecting expected productivity improvements. Alternatively, the firm's prices could be tied to a general index of costs in the industry. In these ways, regulators could achieve a better balance between the desire to prevent monopoly profits from being earned and the goal of maintaining incentives for efficiency and innovation.

SUMMARY

- Telecommunications is a dynamic sector in which regulation must continually evolve to reflect changing conditions.
- Deregulation has permitted innovation that could not have occurred under the previous regulatory regime.
- To promote the continued dynamism of the industry, public policy should seek to maximize the scope of competition and avoid preventing particular firms from competing in particular sectors.
- Incentive regulation is an attractive policy innovation that has the potential to reduce the adverse effects of continued regulation on technological innovation.

DEFENSE INDUSTRIES: ADJUSTING TO THE END OF THE COLD WAR

With the end of the cold war, U.S. defense expenditures are scheduled to be reduced by substantial amounts in the next decade. Although the current situation in the Persian Gulf creates some uncertainty about the immediate future, the scheduled reductions would continue the recent trend that saw defense spending fall in real terms starting in 1987. One obvious impact of these spending decreases will be a substantial reduction in the size of the defense sector, creating a challenge and opportunity for markets to adapt.

HISTORICAL EXPERIENCE

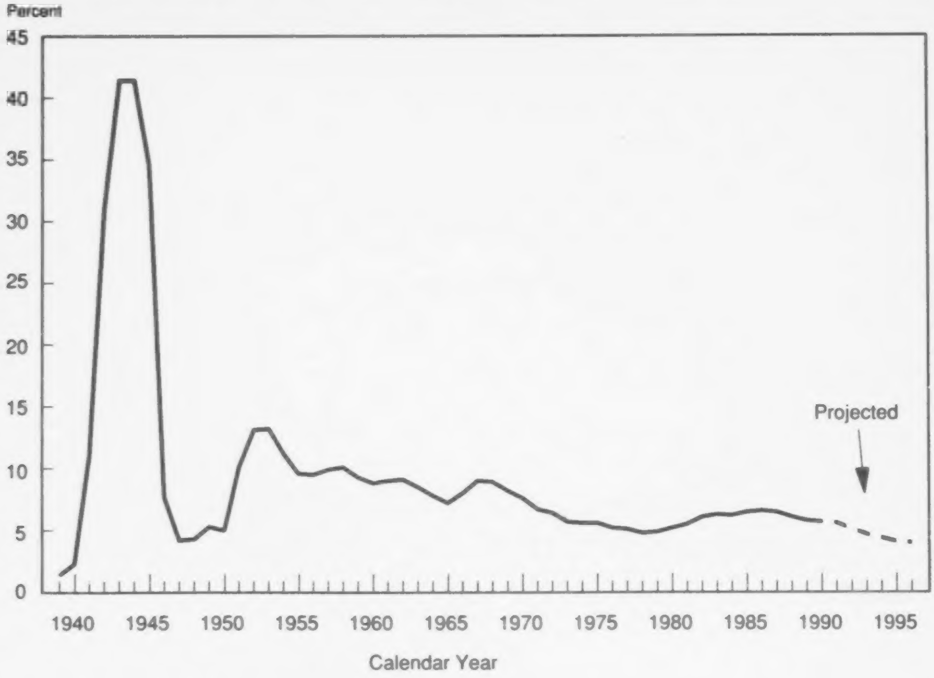
The historical experience with fluctuations in defense expenditures shows that the U.S. economy has little difficulty responding to shifts in defense spending. As shown in Chart 4–2, government expenditures on defense have varied considerably since the late 1930s. Industry responded quickly when defense needs increased, most notably during wartime but also in more recent years. Defense purchases of durable goods, for example, increased more than 50 percent from 1980 to 1984. Declines in spending also provided opportunities for demonstrating the economy's flexibility. Even during the period of greatest reduction, when defense spending fell from 41 percent of GNP in 1944 to 4 percent in 1947, the economy adjusted quickly. Although total output fell in 1946 and 1947 because of the dramatic decline in government spending, consumption and private fixed investment rose as the United States made the transition to a peacetime economy.

A similar temporary decrease in real GNP occurred at the end of the Korean war. As defense spending dropped from 13.2 percent of GNP in 1953 to 11.2 percent in 1954, the economy fell into a recession that lasted 10 months. In 1955, output grew 5.6 percent even though defense spending continued falling to 9.6 percent of GNP. As shown in Chart 4–2, defense spending as a percentage of GNP was lower during the Vietnam war than during previous conflicts. Given this smaller role, it is not surprising that the declines in defense spending as the war ended in the early 1970s had virtually no impact on growth.

This historical experience suggests that future defense cuts will not adversely affect the economy as a whole, since *the relative importance of defense in the U.S. economy has been declining since the early 1950s*, and even the increases of the early 1980s made only a small, temporary bump in the downward trend. The relatively small role played by the defense sector in the U.S. economy helps to ensure that the transition to lower spending levels will be man-

Chart 4-2 **Defense Purchases as a Percent of GNP, 1939-1996**

Projected declines in defense purchases are small by historical standards.



Sources: Department of Commerce and Council of Economic Advisers.

ageable and that resources will be able to move to alternative uses with little impediment.

Under current budget plans, defense spending in 1996 will be lower by 1.7 percentage points of GNP than in 1990. Since the economy successfully adapted to more rapid reductions following World War II and the Korean war, there is little reason to think that the present changes will be troublesome. The precise magnitudes of the spending cuts are uncertain, and some of the decreases could be delayed, or even reversed, by changes in the world situation or an extended deployment in the Persian Gulf.

THE PROBLEM AND POTENTIAL OF DEFENSE CONVERSION

The key problem with the transition of the defense sector to lower spending levels is that the impact is not broad-based but tends to affect drastically firms in only a few industries. The resources of these firms, both the physical capital and the skilled labor, are somewhat specialized for military production and so are reduced in value when defense cuts occur. The communities in which these firms are located will also be adversely affected as employment is reduced. Although these disruptions may require some difficult adjustments, defense cuts are an opportunity to allow market forces to redirect resources toward other productive uses. *Government policy should seek to ensure that the transition occurs as smoothly as possible.* In that way, the harm to communities will be minimized, and unemployment effects will be reduced.

One possible additional concern with cuts in defense spending is their potential effect on the defense industrial base and U.S. technological superiority. In managing the proposed spending cuts, the ability of the United States to continue to produce the equipment needed to fight future conflicts should be maintained. Furthermore, the advantage the United States has in defense technology should be protected through continued investment in research, although some of the priorities may be shifted. The defense technology base can also be protected by relaxing procurement regulations, particularly those that restrict the transfer of defense technology to civilian uses.

Facilitating the Redeployment of Resources

The Federal Government has programs in place that address the problems facing workers and communities affected by defense reductions. It is important to recall that even in times of expanding budgets, some firms and workers lose contracts, as purchases shift to different products or services. Therefore, the problems caused by expected defense cutbacks can be viewed as a somewhat larger version of the typical shifts in demand that occur in a dynamic economic environment. *The true "peace dividend" is not the amount of money saved in the Federal defense budget, but rather the real resources that are made available as defense spending declines.* The economy will benefit from the end of the cold war only if these resources are allowed to shift to new, high-value uses. The reduction in overall government spending will also reduce interest rates and stimulate investment throughout the economy.

Sectoral shifts take place continuously in the U.S. economy, so it is useful to ask whether anything about the defense industry merits special treatment. Because defense spending is exclusively a government endeavor, some have argued that the government has a special obligation to protect those who are affected by declines in Federal defense spending. This argument suggests that government contracts are an entitlement and that any reduction in spending should be offset by compensation. Similar arguments have been made to support policies targeted toward assisting workers adversely affected by other changes in Federal policy.

It would be unwise to accord special treatment to workers or firms directly affected by changes in Federal spending. In addition to the practical difficulties of determining fairly who is actually affected, such an approach effectively divides the work force into two groups, one that receives both Federal support and funding and special privileges when that support is reduced, and all other workers. To the extent that such a policy gave defense workers special benefits, it would be extremely unfair to workers in other sectors. This approach would also make it difficult and costly for the Federal Government to change spending patterns in response to changes in society's needs and priorities. The existing rigidity in government spending patterns already makes it difficult to eliminate programs and policies that have outlived their usefulness.

For several reasons, defense firms sometimes cannot easily transfer their engineering and production capacity to civilian uses. Although many products have both military and civilian uses, many others have characteristics unique to the military. For those firms producing products limited to military uses, the transition to civilian production means dealing with an entirely different set of products. The emphasis in military procurement on producing a limited number of high-performance items with the latest technological advancements, such as fighter aircraft, does not typically encourage the development of organizational skills needed to produce high-quality but not necessarily state-of-the-art products for civilian buyers at lower cost. *Conversion to civilian production means responding to different customers, with goals and constraints often much different from those of the government.* Selling to civilian markets differs markedly from competing with only a few other firms for government contracts in a highly politicized environment.

Although the effects of defense spending cuts are likely to be felt in most sectors of the economy, a few industries will be most affected. Producers of aircraft, radio and TV communication equipment, missiles and space vehicles, and ships are expected to incur some of the largest employment losses. Job changes will probably be more evenly distributed among States because of the wide geographic dispersion of defense production. Many of these forecasts are tentative, however, because of uncertainty about the eventual magnitude of the cuts and which individual spending programs will be reduced or eliminated.

The most appropriate policy for dealing with the problems of defense cutbacks is to cushion the effect of change by providing the same assistance to affected defense workers that is available to all workers displaced by economic changes. Many such programs are available to workers who lose their jobs because of spending cuts. The Job Training Partnership Act provides training opportunities for those workers whose skills are no longer in demand, and the Employment and Training Administration of the Department of Labor also has numerous programs for addressing the needs of displaced workers. In addition, the President's Economic Adjustment Committee, chaired by the Secretary of Defense and composed of 18

Federal departments and agencies, is explicitly charged with providing financial assistance and other support to communities affected by defense spending reductions. These existing programs should be sufficient to ease the transition for workers displaced by defense spending cuts of the size now likely to occur.

Effect of Reduced Recruiting on Civilian Labor Markets

Changes in the Nation's defense budget are also likely to reduce the military's need for manpower. During the 1980s the four military services recruited and trained nearly 3.1 million young men and women, or about 300,000 people each year. This number is expected to decline substantially in the decade ahead. Although the size of the reduction is difficult to forecast with certainty, the services could reduce their annual recruiting by about 100,000 inductees below the average of the 1980s. This number can certainly be absorbed easily in an economy that produced a net employment increase of 19 million jobs during the 1980s and will reduce the impact of the lower rates of labor force growth expected during the next decade.

It is not widely known that the military services are one of the largest single providers of vocational training in the United States. Each year, trained veterans return to civilian life with skills that are highly valued by civilian employers. In the short term, the economy will benefit from the release from military service of a large number of well-trained veterans. Over the long term, the military services will continue to provide training and employment for hundreds of thousands of young people.

SUMMARY

- Proposed cuts in defense spending over the next few years start from a much smaller share of GNP and are modest in size relative to the demobilizations after World War II, the Korean war, and the Vietnam war.
- The economy will adjust smoothly to reductions in defense spending, but some workers and firms will need to adapt to new circumstances.
- Programs are in place to help workers and communities adjust to reductions in defense employment.

CONCLUSION

The ability of the U.S. economy both to generate and to accommodate change is remarkable; the economy's flexibility is one of its major assets. The high U.S. standard of living is due in large part to a flexible economy that encourages innovators to invest in finding new ways to do things and allows entrepreneurs to marshal the resources necessary to bring new products and processes to market.

The government affects the flexibility of the economy in many ways. Flexibility is enhanced by creating an environment conducive to investment and innovation, by minimizing regulatory interference in markets, by lowering barriers to international trade and investment, and by providing a competitive and accountable educational system. The evolution of the agriculture, health care, and telecommunications sectors illustrates the potential for innovation but also demonstrates the harm of government policies that reduce flexibility. Reduced military spending will provide another opportunity to benefit from the economy's ability to redirect resources to new uses.

Change generally creates both winners and losers, and the U.S. political system always allows the losers to argue for protection from the impersonal forces of the market. The true long-run costs of accommodating such demands for interference with market forces is almost always underestimated because the value of the opportunities lost when the economy's ability to change and adapt is reduced can never be fully known. If it is decided that victims of change must be helped, the assistance should not inhibit the economy's natural evolution. Doing so would reduce the economy's flexibility and thus throw away a significant portion of the possible benefits of change.

CHAPTER 5

Innovation and Reform in the Financial Sector

THE U.S. FINANCIAL SECTOR plays an integral role in ensuring a growing, healthy, and flexible economy. The institutions that make up the sector—banks, savings institutions, finance companies, securities firms, insurance companies, investment funds, and others—serve as intermediaries between savers and investors. These institutions also provide transaction services, help reduce risks, and efficiently allocate capital to productive activities that generate economic growth.

The roles played by particular financial institutions and markets have changed substantially in recent decades, and the markets for financial services have become more global. But, apart from piecemeal reform, the regulatory structure governing the financial sector dates from the 1930s. The Administration believes that the Federal deposit insurance system and the regulation of many financial institutions must be reformed and modernized, and it has recently advanced a comprehensive proposal to this end, which is discussed in this chapter.

Today, nearly all economic activity depends on services provided by the financial sector. Every retail transaction involving the use of a check or credit card initiates a process that can require the transmission of information and funds across the country, sometimes in seconds. Most businesses usually require daily services from financial institutions. American banks, savings and loans (S&Ls), and credit unions currently hold more than $3.5 trillion in deposits and, along with other financial intermediaries, extend hundreds of billions of dollars of new credit every year (Table 5-1).

Americans invest in well-diversified portfolios of securities through mutual funds and save for their retirement through pension funds. Through the financial markets Americans invest in securities issued by companies seeking the capital needed to finance productive activities. Investment banks underwrite new issues of securities, thus reducing the risks faced by the issuing companies. By facilitating trade among investors, securities exchanges and securities firms enhance the liquidity of financial markets and thus allow capital to flow to productive uses. On a typical day the ownership of billions of dollars worth of common stock in companies

TABLE 5-1.—*Credit Provided by Private Financial Intermediaries*

[Billions of dollars]

	1984–86	1987–89
Commercial Banks	561	469
Savings Institutions	350	166
Insurance Companies	296	385
Pension Funds	136	171
Finance Companies	143	118
Mutual Funds	303	141
Other	111	152

Note.—Credit flows are 3-year totals.

Source: Board of Governors of the Federal Reserve System.

changes hands through U.S. stock exchanges. An even larger dollar volume of trade takes place through brokers and dealers in the money market.

Insurance companies pool the risks of their customers and thus allow individuals and businesses to insure against fire and other casualties. By purchasing life insurance individuals can provide enhanced financial security for their loved ones. Over 150 million Americans currently have life insurance, with face values representing aggregate coverage in excess of $8 trillion.

The various institutions in this sector have evolved as the need for their services has developed and as technological advances and innovations have allowed them to provide more sophisticated products and better service. Innovations, such as the automated teller machine and telephone banking, have changed the way business is transacted. Computer technology has increased the speed and reduced the cost of information processing. Entrepreneurs, supported by advances in financial economics, have produced a wide array of new financial products. Investors can purchase mutual funds whose values track market indexes. Firms exchange fixed and variable interest payments on debt in swap transactions. Money market mutual funds provide savers a means of investing in a diversified portfolio of short-term debt instruments.

With this rapid innovation, the sector has also experienced considerable stress. In part, the stress has been the result of increasing competition. Here, as elsewhere, *competition is a positive force and should produce stronger, more efficient institutions, which in turn provide better services to consumers and businesses*. Some of the stress, however, is due to the outmoded government regulatory environment within which financial institutions operate. As the financial sector has evolved technologically and as its competitive arena has expanded from the United States to the entire world, existing regulation has, at times, unnecessarily constrained its efficient operation. ***Comprehensive regulatory reform throughout the entire financial sector is, accordingly, a high priority.***

Those who invest the capital needed for growth must have confidence in these financial institutions. Such confidence is warranted only if the financial sector is sound and vital. In the past, when confidence in the financial sector has faltered, so has the economy.

The President has long been committed to ensuring the integrity of the financial sector. As Vice President, he chaired the Task Group on Regulation of Financial Services, which in 1984 outlined the essential ingredients for comprehensive reform of the Federal financial regulatory system. Immediately upon taking office, the President responded to the problems of the savings and loan industry. Enactment of the Administration's recent comprehensive reform proposals will significantly revise the Federal Government's role as insurer of deposits and regulator of the financial sector.

These proposed reforms are based on four principles. *First, a safety net for small savers should be maintained. Second, the safety net should be designed to reward those financial institutions that manage their affairs prudently and to ensure that poorly managed institutions bear the cost of their mistakes. Third, regulations should be flexible and allow financial institutions to respond to changes in global markets. Fourth, rules should be applied consistently across all institutions engaged in the same activities.*

DEVELOPMENT OF FINANCIAL INSTITUTIONS IN THE UNITED STATES

Financial institutions have always played a key role in economic growth, entrepreneurial activity, and industrial expansion in the United States. Before the Revolutionary War, colonists depended primarily on English financial institutions, although there were a few exceptions. Benjamin Franklin, for example, founded the first successful fire insurance company in America in 1752. After the war, an American financial sector quickly developed. The first commercial bank opened in 1781, followed by the first securities exchange, which would later become the New York Stock Exchange, in 1792, the first life insurance company in 1812, and the first building and loan association in 1831.

The U.S. financial sector has usually been both healthy and efficient. Major changes in regulatory or other policies have generally been made only in response to distress in the financial sector and have accordingly been infrequent. Thus, a policy-oriented review will tend to focus on periods of financial distress.

BANKS AND SAVINGS AND LOANS

With the exception of the First and Second Banks of the United States, each of which existed for 20 years, all banks formed before 1863 were chartered by the States. Americans generally distrusted large and powerful banks, and rural communities distrusted urban banks. That led State legislatures to pass laws strictly limiting the ability of their banks to branch—a limitation that persists today in some States.

The development of a large number of geographically constrained banks made the U.S. banking system unique. Other countries generally have a limited number of banks, many with branches throughout the country. About 12,000 commercial banks currently operate in the United States, compared with about 150 in Japan, 550 in the United Kingdom, 65 in Canada, and 900 in Germany. The large number of banks in the United States does not necessarily imply a more competitive banking system. Banks' activities are limited to particular geographic areas, and the number of bank charters is limited, so that bank charters may convey some local monopoly power.

The National Bank Act of 1863 instituted federally chartered banks. National banks were not allowed to branch until 1918, and then only by absorbing other banks. Provisions of the McFadden Act of 1927 and the Glass-Steagall Act of 1933 allowed national banks to follow the branching regulations of the State in which they operated but restricted banks from branching across State lines. The Bank Holding Company Act of 1956 restricted interstate banking by prohibiting bank holding companies from acquiring banks in a second State unless the State expressly authorized the acquisition by statute.

Before the mid-1800s banks showed little interest in providing financial services to households, instead focusing almost exclusively on the needs of commercial and industrial customers. In the 1830s building and loan associations began to meet household demands for financial services. Establishing a practice followed later by S&Ls, savings banks, and credit unions, these early thrifts typically accepted small deposits from individuals and pooled them to provide a source of housing and consumer finance. Early thrifts were chartered, regulated, and supervised by the State within which they operated.

Depositor Runs and Panics

Banking is conducted on a fractional reserve basis; that is, banks and thrifts accept deposits and make investments and loans, retaining reserves equal only to a fraction of their total deposits. Although depository institutions hold some securities, many of their assets are the loans they have made. Some of these loans, such as home mortgages, are relatively easy to value and consequently can be purchased and sold in secondary markets. Others, such as unsecured commercial loans, are generally illiquid because they are not easily valued by potential buyers, who are unfamiliar with the borrowers and their businesses. This information problem also makes it difficult to establish the overall value of an institution.

The lack of liquidity of many loans combined with fractional reserve banking creates the possibility of depositor runs on even solvent institutions. If depositors lose confidence in an institution—whether justified or not—and want to withdraw more cash than the institution holds in reserve, the bank or thrift just cannot deliver. Aware of these risks, depositors are likely to withdraw their funds when they think other depositors are losing confidence. Such behavior produces depositor runs—sudden, massive withdrawals. To cover withdrawal demands, the institution may be forced to sell its outstanding loans, and because purchasers may place a lower value on those loans than the institution, owners of the otherwise solvent institution can lose their investment in the institution.

Throughout the 19th century and into the early 20th century, depositor runs plagued banks. Often runs were isolated, affecting only a single institution or a group of institutions. In some cases, however, depositor runs spread throughout the system, causing panics that had profound consequences for the economy. As deposit balances shrank, the money supply fell, and banks had to curtail lending. Firms that could not borrow the funds they needed to operate had to shut down and lay off workers.

The banking panics of 1893 and 1907 are two examples. In 1893 the money supply fell 6 percent, real gross national product (GNP) fell 3 percent, and the civilian unemployment rate rose significantly. In 1907 the money supply fell 5 percent, real GNP fell more than 8 percent, and the unemployment rate tripled. Although other factors were also involved, these banking panics are generally acknowledged to have generated or contributed significantly to the economic downturns that ensued.

Lender of Last Resort

In response to the demonstrated danger of banking panics, the Federal Reserve System was created in 1913. Its primary objective was to use its powers to create currency and bank reserves to make the supply of currency responsive to economic activity and to prevent or deal with banking panics. The Federal Reserve served as a lender of last resort. A bank facing a depositor run would meet withdrawal demands by borrowing currency from the Federal Reserve. However, the Federal Reserve's ability to deal with panics was limited. It could only lend to banks that were members of the Federal Reserve System, and it required eligible loans and securities as collateral when it lent.

THE GREAT DEPRESSION AND BANKING REFORM

The 1920s were prosperous years for most Americans, as the rewards of past industrial investments fueled rapid growth in living standards. At the same time, banking grew increasingly competitive. Between 1921 and 1929, 5,712 banks failed—nearly 20 percent of the more than 29,000 banks that existed at the end of 1920. Urban banks consolidated in an attempt to attain sufficient size to meet the demands of their rapidly expanding commercial customers. Banks began to offer new services to keep customers, and distinctions between banking and securities firms blurred.

When the "Roaring Twenties" ended with the stock market crash of 1929, many banks lost funds directly through their stock holdings and perhaps indirectly through losses on loans to stock market investors. As the developing recession deepened, depositors lost confidence and a severe banking panic ensued. *Instead of responding to the panic by easing constraints on money growth and thus minimizing the impact of the panic, the Federal Reserve allowed the money supply to fall.* That contributed to a severe contraction in bank lending, which in turn reduced economic activity and led to further loan losses for banks.

This downward spiral resulted in the wholesale collapse of the financial system and the beginning of the Great Depression. *During the 4 years 1930–33, 9,096 banks failed—36 percent of the banks that had existed at the beginning of 1930.* Total deposits in commercial banks fell 39 percent. Real GNP declined 30 percent from 1929 to the low point of the Depression. From 1929 to 1933 the unemployment rate soared from 3 percent to nearly 25 percent.

The Federal Government responded to the collapse of the banking system by enacting the Banking Acts of 1933 and 1935. These laws established the Federal Deposit Insurance Corporation (FDIC) to prevent depositor runs by insuring bank deposits. *They also reduced competition among banks by prohibiting the payment of interest on demand deposits and by placing a ceiling on the interest rate that could be paid on time deposits.* Finally, they prohibited banks from participating in much of the securities industry. Continued constraints on entry into banking further limited competition.

These banking laws stabilized the banking industry; there has not been a system-wide panic since their passage. *Deposit insurance worked because the FDIC had no discretion.* If a bank failed, the FDIC paid off its insured depositors, no questions asked. With this guarantee, insured depositors had no reason to initiate a depositor run. The rate of bank failures also dropped dramatically. Only 537 banks failed between 1934 and 1954—less than one-half the number of failures in any single year during the 1930–33 period.

Although the reforms helped to stabilize the economy, they clearly entailed significant costs. Depositors no longer received interest on their checking accounts, were limited in the interest they could receive on their savings accounts, and, because competition was reduced, paid more for services received from securities firms.

Along with thousands of banks, more than 1,700 S&Ls failed during the Great Depression. Individuals withdrew their savings as they lost confidence in S&Ls or to deal with their own financial problems. S&Ls also had to contend with defaults on many of their home mortgages. To restore confidence in S&Ls, the Federal Government in 1932 established the Federal Home Loan Banks, which served as lenders to S&Ls and hence enhanced their liquidity. Moreover, just as the FDIC was established to insure deposits at commercial banks, the Federal Savings and Loan Insurance Corporation (FSLIC) was established in 1934 to insure deposits at S&Ls.

The Federal Housing Administration (FHA) was also established to insure lenders against the risk of default on mortgage loans. Long-term, fixed-rate mortgages, which were to play a key role in the later S&L crisis, first appeared during the Depression, following the introduction of FHA mortgage insurance.

Two features of the banking reforms of the 1930s would contribute to problems many years later. The deposit interest rate ceiling would contribute to disruptive "credit crunches" in the 1960s and 1970s. As market interest rates rose above the deposit interest rate ceilings, funds flowed out of banks and thrifts, causing liquidity crises for the institutions and disrupting credit flows to business and mortgage lending. Moreover, the price of deposit insurance did not reflect risk. Both features would contribute to the S&L crisis 50 years later.

The regulatory response to the Great Depression also addressed problems in the financial markets. The Securities Act of 1933 was intended to protect investors who purchased newly issued securities. The Securities Exchange Act of 1934 was designed to protect investors that bought and sold existing securities against fraud and market manipulation.

SUMMARY

- Consumers and businesses rely on the financial sector for a wide variety of services, which enhance living standards and the Nation's economic vitality.
- Federal and State laws greatly constrained banks from operating in more than one State and from branching within States. Although some of these restrictions have been lifted, many are still in place.
- Federal banking regulations adopted to deal with the collapse of the banking system during the Great Depression have succeeded in eliminating the threat of bank runs and panics. But

the laws also reduced competition among financial institutions and contributed to today's problems in the industry.

THE 1970s: INFLATION, HIGH INTEREST RATES, AND NEW COMPETITION

For nearly 30 years after the Great Depression, the financial sector experienced an era of relative profitability and little stress. That began to change in the late 1960s and early 1970s with *increases in the level and volatility of the rate of inflation, the advent of the electronic age and new competition, and the increasing internationalization of the world's economies.*

The average annual rate of inflation rose from less than 2 percent in 1950–65, to about 4.5 percent in 1966–73, to nearly 9.5 percent in 1974–81; in that last period the rate was also very volatile, ranging from about 6 percent to almost 14 percent. As the level and volatility of inflation increased, so did the *level and volatility of interest rates*. Faced with higher levels of inflation, lenders demanded higher interest rates, since the dollars with which they would be repaid in the future would be able to purchase less than the dollars they were lending. These higher, more volatile interest rates increased the general level of risk for all commercial and financial companies, but the S&L industry was particularly hard hit.

RISE OF MONEY MARKET FUNDS

Financial markets and institutions developed an array of new instruments to help businesses and individuals deal with the uncertainties of high and volatile interests rates. Adjustable-rate mortgages gave borrowers the option of paying lower average rates if they were willing to bear the risk that interest rates might increase. (See Box 5-1 for discussion of inflation-proof bonds and mortgages.) Interest rate swap contracts allowed a borrower to obtain a fixed rate loan indirectly by first borrowing from a bank at a variable rate and then "swapping" its variable interest rate payments with a borrower that had borrowed at a fixed interest rate. Securities exchanges issued bond futures contracts, which effectively allowed market participants to borrow or lend at specified interest rates at a future date.

Inflation and high interest rates also led to the development of a major new form of competition to banks and thrifts—the money market mutual fund. When interest rates rose in the 1970s, *interest rate ceilings on bank and savings and loan deposits were significantly below the market interest rates being paid on short-term low-risk debt instruments.* Investors looking for interest rates higher than banks and thrifts could pay turned quickly to the new money market mutual funds, which invested primarily in instruments

Box 5-1.—Inflation-Proof Bonds and Mortgages

Bonds and mortgages typically specify constant payments over their entire maturity. Their interest rates are set high enough to compensate lenders for the expected inflation-induced erosion of the purchasing power of future payments. *Inflation-proof* assets are fundamentally different: They preserve the purchasing power of interest payments and principal by changing them proportionately with a measure of the overall price level such as the consumer price index. Because inflation-proof assets eliminate the financial risks of unanticipated inflation and the need to compensate lenders for that risk, their guaranteed *real*, or inflation-adjusted, interest rates are lower than those on typical assets.

Compared to payments on a 30-year, 10-percent, fixed-interest-rate mortgage, payments on a 4-percent, real interest-rate, inflation-proof mortgage would start more than *one-third lower*. Payments would rise at the same rate as the average price of the items in household budgets and move similarly to the rent would-be homeowners pay. (Adjustable-rate mortgages help reduce borrowing costs by shifting interest rate risk to borrowers, but their payment levels are not designed to track income and price levels.) To the extent that a borrower's real income falls over time, payments on an inflation-proof mortgage would become more burdensome.

Inflation-proof bonds and mortgages are not common. These debt instruments have generally developed only in countries where inflation has been relatively high and variable. One reason is that when inflation is expected to be relatively low and stable, the cost of introducing these instruments may appear to outweigh the benefits they offer. In that case, borrowers and lenders seem to prefer the certainty of constant payments.

Recent clarifications of the regulatory and income tax status of inflation-proof bonds and mortgages have removed important obstacles to their use in the United States.

such as short-term government (Treasury bills) and corporate (commercial paper) debt securities. Low information processing costs made it profitable for money market funds to deal with even small investors. By bringing borrowers and lenders together, albeit with help from the marketplace, these funds played a role similar to the intermediary role banks and thrifts traditionally played.

The success of money market funds increased the demand for commercial paper by providing small investors with low-cost, indirect means of accessing that market. Assisted by improved technology that reduced the cost of conveying information to financial markets, corporations, particularly large ones, began to bypass banks and borrow directly in financial markets by issuing commercial paper. Nonbank finance companies began to increase their lending activities at about the same time. Thus, banks were being bypassed on both the borrowing and the lending side of the business. Charts 5-1 and 5-2 illustrate these phenomena. Chart 5-1 shows the growth of money market funds relative to total commercial bank deposits. Chart 5-2 shows the increasing competition for business lending among banks, finance companies, and the commercial paper market.

The opportunity to invest savings conveniently and at low cost through mutual funds represented a substantial increase in competition for savings that had traditionally been deposited in banks and thrifts. In addition, increased information processing capabilities as well as greater sophistication on the part of business managers led to a revolution in cash management techniques, which reduced idle cash balances in business accounts. *These competitive pressures resulted in the phasing out of interest rate ceilings on bank and thrift deposits by 1986.* As banks and thrifts began to offer higher interest rates on deposits, the growth of money market funds slowed, but they remained strong competitors.

It is important to realize that while banks and thrifts struggled to meet new competition, *consumers of financial services benefited from the increased competition.* Savers were able to earn higher rates of interest, both from money market funds and, once deposit interest rate ceilings were eliminated, from banks and thrifts. Borrowers also benefited from the development of alternative sources of funds and increasing competition among lenders.

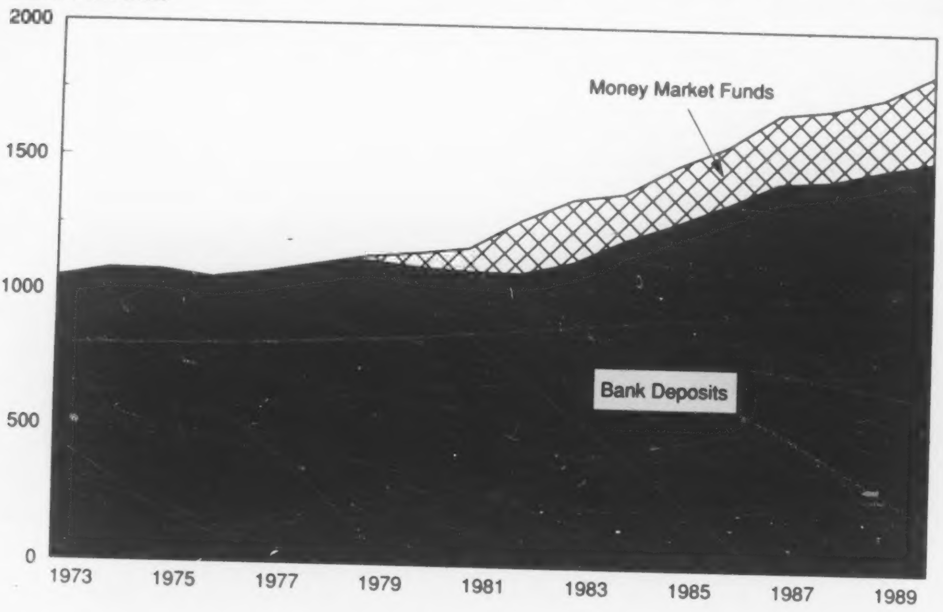
INTERNATIONALIZATION

At the same time that the financial sector has experienced dramatic change on the domestic front, it has also faced new challenges internationally. Many financial institutions now operate in a global marketplace and face worldwide competition. Industrial firms increasingly need assistance with international financial transactions from their bankers, which requires banks to have a greater presence throughout the world.

In addition, U.S. banks are facing greater competition from foreign banks at home, while only a few U.S. banks are significantly increasing their business overseas. Chart 5-3 illustrates the rapid growth in the total assets of U.S. offices of foreign banks. Foreign banks and the U.S. chartered banks they own have been particularly successful in penetrating the business lending market. Their share of U.S. business loans rose from 10.4 percent in 1975 to 28.5

Chart 5-1 **Deposits and Money Market Funds**

Money market funds, which compete with bank deposits, have grown significantly since their introduction.

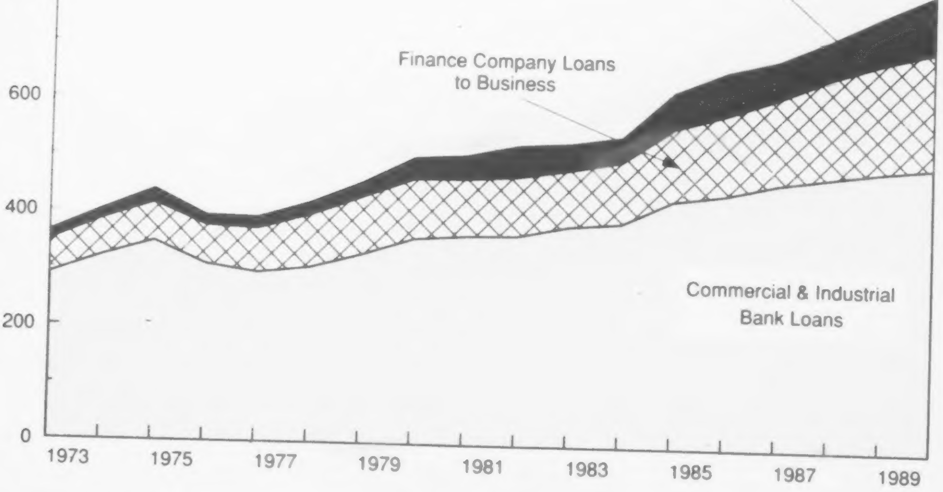


Note: Bank deposits are the sum of money stock measures of demand deposits, other checkable deposits at commercial banks, and time and savings accounts at commercial banks less deposits held by money market funds. GNP implicit price deflator is used to deflate nominal figures.

Sources: Board of Governors of the Federal Reserve System and Department of Commerce.

Chart 5-2 **Composition of Loans to Businesses**

Loans by finance companies and nonfinancial commercial paper have become a significant source of commercial credit.

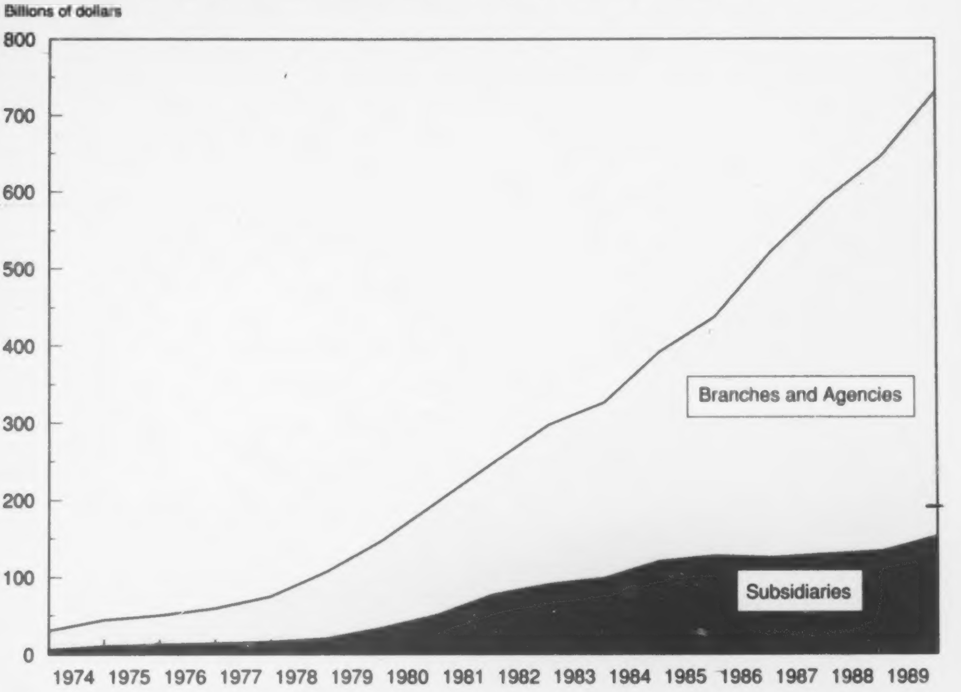


Note: GNP implicit price deflator is used to deflate nominal figures.

Sources: Board of Governors of the Federal Reserve System and Department of Commerce percent in June 1989. At the end of 1989 the foreign share of U.S. banking assets was 20.4 percent.

Chart 5-3 **Assets at U.S. Offices of Foreign Banks**

Foreign bank assets in the United States have increased rapidly since the late 1970s.



Source: Board of Governors of the Federal Reserve System.

Different countries impose different rules and regulations on their banks that affect their ability to compete with banks from other countries. In an effort to make capital requirements—the minimum amount of owner's equity required as a percentage of total bank assets—more consistent worldwide, the central bank governors of 11 industrial nations endorsed the Basle framework for measuring capital adequacy and achieving minimal levels of capital based on credit risk. The minimum capital standards associated with the Basle framework are being phased in over a 2-year period that began December 31, 1990, and will require some U.S. banks either to shrink in size or to raise additional capital during that period.

These new capital standards focus on credit risk, but need to be realigned to reflect other risks that banks may bear such as foreign exchange risk, interest rate risk, and equity position risk. Bank lending practices could continue to be distorted until capital standards are balanced to reflect these other risks. Such reorientation of the Basle framework to more accurately reflect the different types of risk is currently under active consideration.

SUMMARY

- Higher and more volatile rates of inflation in the 1970s led to higher and more volatile interest rates and increased stress in the financial sector.
- Money market mutual funds began to compete with banks and thrifts for the savings of Americans. Initially, banks and thrifts were constrained in their ability to compete by deposit interest rate ceilings, and these money market funds grew rapidly.
- The Basle framework established international capital standards based solely on credit risk. The Administration encourages efforts to realign these standards to more accurately reflect the different types of risk.

THE S&L CRISIS

The increase in interest rates in the late 1970s and early 1980s had a profound effect on the savings and loan industry. The rate increase was, as we have seen, a major factor in the emergence of money market mutual funds as major competitors to S&Ls for the funds of savers. But higher interest rates had an additional effect on S&Ls: They produced large and widespread losses on mortgage portfolios.

These interest rate increases and resulting losses proved to have far-reaching consequences. About half of all S&Ls in business in 1970 no longer existed in 1989; more than 2,700 had merged, gone out of business, or been placed under the control of government regulators. By the end of 1986 the Federal Savings and Loan Insurance Corporation itself was deemed insolvent. While the ultimate cost of the S&L crisis will reflect many factors, the Administration estimates that, including costs incurred prior to 1989, the resolution of the crisis will cost between $130 billion and $176 billion. The crisis has also led to fundamental changes in the way that S&Ls operate and in the regulations that guide them.

VULNERABILITY TO INTEREST RATE INCREASES

For decades S&L assets consisted predominantly of fixed-rate mortgages that typically covered a term of 20 to 30 years. At the end of 1980, for example, FSLIC-insured institutions held more than three-fourths of their assets in residential mortgages and in mortgage-backed securities, which are bonds whose values parallel those of mortgages.

Although the assets of S&Ls consisted largely of fixed-rate mortgages, their deposit liabilities were primarily short-term. When interest rates rose on other assets that households might hold, such as Treasury bills, deposit interest rates had to be increased comparably to enable S&Ls to retain the deposits that provided their funding. The costs to S&Ls increased, even though revenues from outstanding mortgages remained fixed. This fundamental *mismatch* of short-term, and thus adjustable-rate, deposit liabilities and long-term, fixed-rate mortgage assets left S&Ls vulnerable to interest rate increases.

In the two decades following World War II, interest rates changed only modestly and relatively gradually. The rates S&Ls earned on outstanding mortgages tended to be above the interest rates they paid on deposits and similar to prevailing mortgage interest rates. In such circumstances, the mismatch between short-term deposits and long-term, fixed-rate mortgages causes few problems.

Net Worth Imperiled

Serious troubles for the S&Ls began in the second half of the 1960s. As the economy prospered and inflation began to increase, interest rates on newly issued mortgages began to rise considerably above those on the mortgages S&Ls already held (Chart 5–4). Long-term interest rates then rose to much higher levels in the late 1970s and early 1980s, as inflation rose to historically high rates and monetary policy was tightened to subdue that inflation.

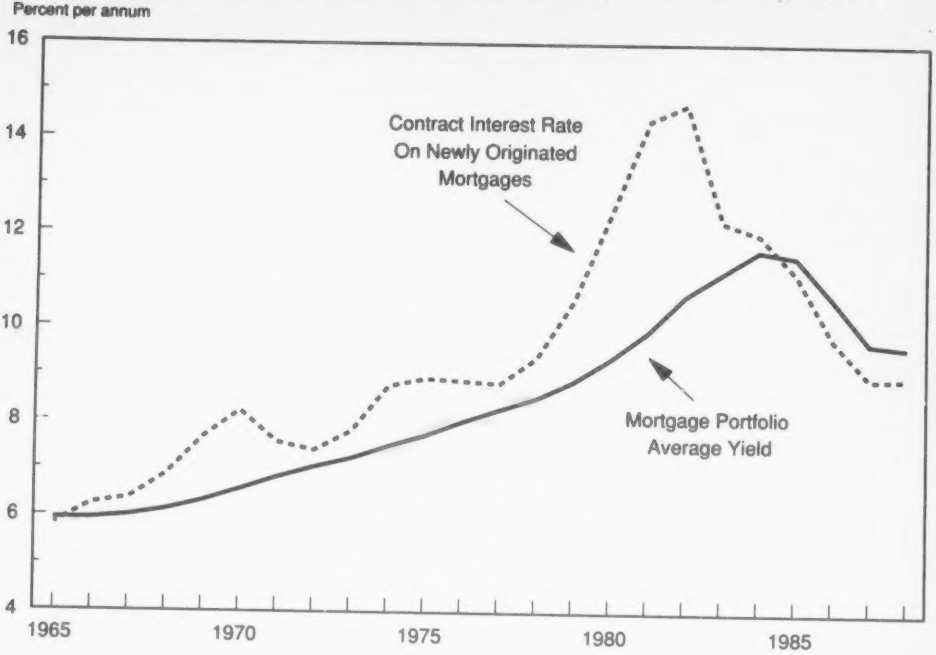
Mortgages originated in prior years and still held by S&Ls now provided less interest income than newly issued mortgages. As Chart 5–4 indicates, in 1980, for example, thrifts earned an average yield of 9¼ percent on outstanding mortgages, while the prevailing rate on newly issued mortgages was about 12½ percent. Since the market value, or price, of a fixed-rate asset falls as the interest rate rises, the sharp increase in mortgage interest rates slashed the value of the outstanding mortgages held by S&Ls.

A 3¼-percentage point increase in mortgage rates would suggest a fall in the market, or economic, value of a typical outstanding mortgage of about 20 percent. A typical S&L might hold 80 percent of its assets in mortgages. Thus, if the value of assets other than mortgages remained unchanged, a 3¼ point increase in mortgage interest rates would imply a fall of about 16 percent in the total value of the S&L's assets. For an S&L that initially had capital equal in value to 4 percent of assets, such an increase in interest rates would result in the value of the S&L's liabilities exceeding the value of its assets by 12 percent as long as the value of the deposits and other liabilities remained constant. If the S&L owners were required to make good on all of their liabilities, the increase in interest rates would have reduced the value of their capital from 4 percent to negative 12 percent of the original value of assets.

Regulators require S&Ls and other institutions with insured deposits to have net worth, or capital, that meets or exceeds a specified percentage of their liabilities, which has often been in the

Chart 5-4 **New Mortgage Interest Rates and Thrift Portfolio Yields**

In the late 1970s and early 1980s, interest rates on new mortgages rose well above the average yield on mortgages in thrift institutions portfolios, thereby sharply reducing the value of these portfolios.



Source: Department of the Treasury.

range of 5 percent. The book-value measure regulators use to value assets, liabilities, and therefore the owner's stake in the institution, or net worth, is imperfect for several reasons. It relies mainly on historical costs to value assets and liabilities and often does not capture changes in their economic value. Moreover, it typically measures only the value of *tangible* assets. Thus, the value of the institution's charter (right to operate) and customer relationships (goodwill) may not be captured.

An institution is *economically solvent* when its *economic* net worth or capital, the amount by which the market value of its assets (both tangible and intangible) exceeds the market value of its liabilities, is positive. Thus, a decline in the market value of assets larger than its economic capital pushes an institution into economic insolvency. The enormous capital losses implied by the interest rate increases shown in Chart 5–4 and approximated above were almost certainly large enough to push a substantial portion of the S&L industry into economic insolvency, even allowing for the value of unmeasured intangible assets. The book-value method did not reflect the fall in the value of mortgages held by S&Ls. In fact, because mortgages could be carried at book value, regardless of their market value, *this decline in value would not be immediately signaled by book-value accounting.* Book-value accounting would reflect the economic losses associated with the fall in the value of mortgages gradually as interest expense on short-term liabilities increased relative to interest income on long-term assets.

Transactions with little economic significance can also be undertaken to affect the value of capital, as calculated under book-value accounting. When interest rates fall, the market values of assets such as fixed-rate mortgages *rise* relative to their book values. Financial institutions can sell these assets in the secondary market to realize those higher market values and thereby bolster their measured capital. On the other hand, when increases in interest rates or default risks lower the market values of assets below their book values, institutions can retain those assets on their books at book value.

Troubled institutions seeking to raise the *accounting* value of their capital can issue new debt, the market value of which at issuance is also book value. The funds raised can then be used to buy back a larger book-value amount of the institution's previously outstanding debt, since the market value of that debt is below its book value due to the institution's troubled condition. That "refinancing" makes the accounting value of capital rise, since the book value of liabilities falls.

The decline in interest rates after 1982 could not (and did not) restore the industry's health. Just as the rise in interest rates on new mortgages above rates on existing fixed-rate mortgages provided homeowners with an incentive to keep their mortgages longer, the decline in mortgage rates provided an incentive for homeowners to refinance by taking out new, lower interest rate mortgages and paying off their outstanding mortgages. In 1986, for example, nearly half of the mortgages originated by thrift institutions were refinancings. By 1989 the fraction of mortgage debtors who had refinanced was more than double its 1977 level. *Such refinancings reduced the costs to borrowers but also reduced the income of lenders.* Thus, S&Ls did not gain as much when interest rates fell as they lost when interest rates rose.

Deposit Rate Deregulation and Lending Liberalization

As noted earlier, the elimination of interest rate ceilings allowed S&Ls to pay higher interest rates on deposits and thus slowed the flow of funds out of the thrifts. To reduce the thrifts' problems associated with being heavily concentrated in long-term, fixed-rate mortgages, the Congress relaxed restrictions on the ability of federally chartered S&Ls to engage in consumer, business, and commercial real estate lending. Adjustable-rate home mortgages were also permitted. State-chartered S&Ls in some States were given greater freedom by their regulators to operate in nontraditional spheres.

These changes were designed to enhance the industry's health by permitting S&Ls to compete more effectively for deposits, to diversify across a broader set of assets, and to reduce their exposure to interest rate risk. Though these changes were generally beneficial to S&Ls, subsequent events showed the danger of giving new, unfamiliar powers to *weak or insolvent* institutions.

Many blamed this deregulation and liberalization for causing the S&L crisis that emerged in the late 1980s. However, S&Ls had suffered substantial economic losses before much of the significant deregulation of deposit interest rates and the loosening of lending restrictions in the 1980s. Many of the S&Ls that later failed were already economically insolvent before this deregulation and liberalization. *In fact, the deregulation and loosening arose largely in response to the severe problems S&Ls were having.* As discussed later, insolvent firms had especially great incentives to pursue the risky ventures newly open to them. Failing to provide appropriate supervision in the light of the S&Ls' enhanced opportunities to make risky investments proved to be a costly mistake.

INSOLVENCY AND CLOSURE

The combination of high interest rates and loss of deposits to money market funds created liquidity problems for many S&Ls, which found it increasingly difficult to meet withdrawal demands. These thrifts could have raised funds by selling existing mortgages; however, accounting principles would have required the thrifts to recognize the loss taken on mortgages sold. Doing so would have forced economically insolvent institutions into actual insolvency (based on book-value measures of capital). Thus, if an S&L did not sell its mortgages, it would have to be closed for not meeting depositor withdrawal demands. If it did sell its mortgages and recognize its economic losses, it would have to be closed for not meeting its capital requirements.

Rather than force the closure of a substantial portion of the S&L industry, the Congress authorized various actions by regulatory agencies to assist troubled institutions, and the Federal Home Loan Bank Board—the chief regulator of S&Ls—changed the regulatory accounting procedures used to measure capital. However, by allowing S&Ls to amortize their mortgage losses over several years, instead of recognizing those losses immediately, *regulators did not eliminate the problem but merely postponed it.* One study claims almost half of the insolvent thrift institutions at the end of 1988 had already been insolvent, under the accounting measures that regulators had abandoned, for 4 years or more.

Another reaction to the inadequate levels of capital was also controversial. Given the increased risk of insolvency, the Federal Home Loan Bank Board would have been justified in setting higher minimum capital ratios. *Higher ratios would have protected the deposit insurance fund and the public against the increased interest rate risk. Instead, the bank board lowered the minimum capital ratios required.* In early 1980, minimum capital requirements were more than 5 percent of liabilities. They were lowered in late 1980 and again in 1982 to 3 percent of liabilities. A number of regulations were also adopted that further reduced the stringency of capital requirements.

Even when the regulatory accounting measures did indicate that minimum capital standards were being violated, closure did not always occur. The Federal Home Loan Bank Board ran into resistance when S&L lobbying diluted and delayed legislation providing funds for FSLIC to close insolvent thrifts. In addition, budgetary stringency did not provide sufficient examination and supervision staff and resources to keep pace with the unfolding crisis. In 1986 the Chairman of the Bank Board testified to the Congress that lack of funds prevented his agency from dealing with almost 100 problem S&Ls.

Incentives of Undercapitalized Institutions

The price that banks and thrifts pay for deposit insurance—unlike the premiums paid for other types of insurance—does not take into account the financial position or financial health of the individual institution that holds the insured deposits. The premium does not vary with the riskiness of the assets held by the institution and is the same whether the institution is financially sound or near collapse. Such fixed-price insurance gives bank and thrift owners an incentive to take risks, since neither depositors nor the deposit insurer needs to be compensated for risk.

So long as an institution is well-capitalized, its owners are unlikely to take imprudent risks since their own funds are at stake. That changes as an institution becomes undercapitalized. No longer having significant (or perhaps any) equity, owners have little to lose. If the S&L becomes insolvent, the owners will eventually be forced to surrender ownership, and any remaining assets of the S&L will be used to pay off depositors. In such cases, some owners might decide that risky investments are worth a gamble, for if the investments are profitable enough to return the institution to economic health, the owners retain the net worth of the S&L. If the investment fails, the deposit insurer will repay any losses on insured deposits. The closer an institution comes to insolvency, the more rewards become one-sided: Heads, the S&L owners win; tails, the deposit insurer loses.

Many economically insolvent institutions expanded at phenomenal rates, doubling or tripling their assets every year, in attempts to regain solvency. The worse off the thrift, the higher the rate of return that is needed to return to economic health. That was a principal attraction of investing in risky ventures: the greater the possibility of high rewards, the greater the possibility of recovery. In fact, it was inadequately capitalized S&Ls that ventured most heavily into higher risk investments.

Undertaking such a strategy required that funds be raised to invest. Federally guaranteed deposit insurance enabled undercapitalized, but still operating S&Ls to retain and attract the funds required to invest in high risk ventures at nearly default-free interest rates. Whether economically solvent or not, insured institutions could attract virtually unlimited funds by offering sufficiently high interest rates on their federally insured deposit accounts. The safety of the deposits was altered neither by undercapitalization nor by the riskiness of the investments they funded.

Estimates of the Cost

Some gained and some lost from the S&L crisis, but the cost to the public as a whole was large. The inflation-induced rise in interest rates that reduced the value of the S&Ls' mortgages bestowed gains of equal value on their borrowers by reducing the real value of mortgage payments. Depositors also benefited as the level of deposit rates at all institutions were bid up by the attempts of insolvent thrifts to garner more funds.

If some investors acquired insolvent institutions from the government for "below-market" prices, then wealth was also transferred from the public to those investors. And, unfortunately, there is the reality of ill-gotten gains. By the end of 1990, the Department of Justice had obtained nearly 400 convictions in major fraud cases in connection with the S&L crisis.

The cost to the public of resolving the crisis will be spread over several years. Who bears that burden depends on how the Federal spending and tax programs are changed to absorb those costs. The Administration cost estimate of $130 billion to $176 billion (including pre–1989 costs) is considerably below the $300 billion to $500 billion estimates that others have reported. *The huge difference is entirely illusory, for these two estimates refer to different calculations of the same cost to the public.* The former estimates how much it would cost to resolve the S&L crisis completely now. The latter estimates are obtained by adding up all the future repayments required on the bonds that must be issued to fund the current cost. Such an estimate would be akin to claiming that a 10-percent, 30-year, $100,000 home mortgage costs $315,925, which in fact is the undiscounted sum of the repayments required by that mortgage.

RESOLVING THE S&L CRISIS

The Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA)—originally proposed by the President—

sought to minimize present costs of past difficulties and to prevent future crises. Though it did not finish the task of financial reform and rebuilding, FIRREA achieved a number of important objectives. It preserved the integrity of the deposit insurance system by ensuring that depositors lost none of their federally insured funds; set limits on the activities of inadequately capitalized institutions; established and provided for funding the Resolution Trust Corporation so that it could quickly begin to reorganize economically insolvent institutions; and established the Office of Thrift Supervision within the Department of the Treasury to replace the Federal Home Loan Bank Board as the chief regulator of S&Ls. It established the Savings Association Insurance Fund within the FDIC to replace the insolvent FSLIC. In addition, the law strengthened criminal and civil sanctions for illegal activities involving financial institutions.

Perhaps most importantly, FIRREA raised the minimum capital requirements for federally insured savings institutions, so that S&Ls will have to meet capital requirements no less stringent than those for national banks. Capital at these levels will provide a legitimate and substantial buffer between thrifts and the deposit insurance fund. Further, in December 1990, the Office of Thrift Supervision proposed that the capital requirement for a thrift reflect its exposure to interest rate risk. If implemented, that requirement would give thrifts an incentive to reduce their interest rate risk exposure.

SUMMARY

- S&Ls have faced problems since interest rates began to rise in the mid-1960s. Contrary to what is often asserted, their problems did not originate with deposit-rate deregulation or liberalized lending restrictions.
- Meeting the more stringent capital requirements called for in FIRREA will provide the deposit insurance fund and the public with a buffer against future difficulties.

REFORM IN THE FINANCIAL SECTOR

The financial sector provides services that are essential for economic growth, and thus it is important for this sector to operate effectively. Reform required to ensure that the financial system functions smoothly and efficiently is well under way. The Financial Institutions Reform, Recovery, and Enforcement Act of 1989 was only the first step in this program. The Federal Credit Reform Act of 1990, enacted as part of the Omnibus Budget Reconciliation Act of 1990, will help the government make better use of the resources it puts into its Federal credit programs, while comprehensive reforms recently proposed by the Administration, if enacted, will substantially alter the role the Federal Government plays as regulator of depository institutions and insurer of their deposits.

CONTEXT FOR DEPOSITORY INSTITUTION REFORM

Since the insurance program and many of the rules regulating banks and thrifts were drawn up during the Great Depression, dramatic developments have changed the financial sector. Many of the conditions that created the problems of the 1930s no longer exist today. More efficient means of addressing those that still remain may now be available. Moreover, any regulatory reform should allow the market to play its role in efficiently allocating resources.

The goal of reforming banks and thrifts should be to ensure that the financial system is efficient, competitive, and free from the danger of disruptive panics. The reforms of the 1930s succeeded in eliminating panics, but the constraints those reforms created and under which banks and thrifts still operate hinder their efficiency and competitiveness in today's environment.

As a general rule, government intervention in the private sector may be appropriate when the market fails, that is, when competitive private markets do not exist or cannot function well. A market failure alone, however, does not necessarily justify government action. Regulation should also pass cost-benefit tests, and be carefully designed to provide strong incentives for efficiency. Otherwise, the cure may end up being worse than the corresponding disease.

Reform of depository institutions must be considered in the proper context. The right to operate a depository institution comes with both benefits and costs. It is important to think about these costs and benefits both within the competitive framework of banking and in the broader context of the entire financial sector. Relative to nonbanking firms, banks and thrifts have certain advantages: access to Federal deposit insurance, to the payments system that provides rapid check clearing, and to borrowing from the Federal Reserve. However, they are also required by the Federal Reserve to hold reserves that do not pay interest and are constrained in their activities by laws and regulation.

If banks and thrifts faced no competition from outside banking, vigorous competition within banking would result in any net benefit or cost being transferred to the consumers of financial services. Thus, a net benefit would accrue only to individual institutions with local monopoly power associated with a bank or thrift charter. However, banks and thrifts also compete with other members of the financial sector, which requires that a delicate balance be maintained as the financial sector evolves. If the benefits and costs associated with the right to operate a depository institution result in a net benefit *relative to nonbanking firms*, depository institutions will have an advantage relative to those firms, making it difficult for the nonbanking firms to compete. However, if the result is a net cost relative to nonbanking firms, depository institutions will have difficulty competing.

The banking reforms of the 1930s may have initially tipped the scales in favor of depository institutions. They faced little competition for savings or intermediated lending from other institutions. Moreover, limitations on competition and restrictions on entry generally made banks and thrifts profitable, but these limitations also allowed inefficient institutions to survive. They were less profitable than efficient providers of banking services, but facing limited competition, they could still continue to operate.

The proof is in the numbers. In any competitive industry one would normally expect to see new firms entering the industry and inefficient firms failing. In banking, the failure rate was remarkably low for many years. *Between 1945 and 1975 the annual failure rate of commercial and industrial enterprises was more than 11 times higher than the failure rate for commercial banks.* The low failure rate in banking is consistent with low levels of competition and the survival of inefficient institutions.

The evolution of the financial sector and reductions in impediments to competition in banking have greatly reduced, if not eliminated, any advantage banking institutions may have had in the past. In an increasingly competitive environment, inefficient banks and thrifts will not survive. Many will be absorbed by better-managed institutions. Others will fail. Thus, it should not be surprising to see an increase in the rate of consolidation and even failures as competition increases. Consolidation of banking or the potential failure of inefficient depository institutions should not be used as a justification to avoid comprehensive reform. Faced with continued competition from nonbank financial institutions, an inefficient banking system will be neither safe nor sound in the long run.

ISSUES IN DEPOSIT INSURANCE REFORM

President Franklin Roosevelt was one of many who initially opposed the creation of a Federal deposit insurance system for fear that it would encourage excessively risky bank operations. "The minute the Government starts to do that the Government runs into a probable loss . . . , " Roosevelt said. "We do not wish to make the United States Government liable for the mistakes and errors of individual banks, and put a premium on unsound banking in the future."

Roosevelt's fears were unfounded in the years following enactment of the insurance program. With only limited competition, banks and thrifts had little reason to pursue excessively risky strategies. Limited competition increased profitability and the value of holding a bank or thrift charter. Excessively risky strategies put this value at risk and, therefore, were not generally pursued.

As competition increased, however, profit opportunities for banks and thrifts eroded and the value of their charters decreased, causing a gradual decline of the economic capital in depository institutions. High interest rates accelerated the decline of economic capital among S&Ls. For banks, the erosion of economic capital has been more gradual and less severe. In fact, most banks have substantial tangible capital and remain well-capitalized. Nonetheless, losses in economic capital, due to the deterioration of charter value, combined with deposit insurance premiums that are insensitive to risk-taking, have given weak banks increased incentives to take undue risks. With less to lose, they are willing to take greater risks.

In most industries, incentives to take excessive risks are kept in check by the market. The cost of capital for firms pursuing risky strategies increases. This mechanism operates weakly in banking since banks are largely financed through insured deposits. The government guarantee virtually eliminates any concern insured depositors might have about the actual operations of a bank or thrift. Thus, these investors in a bank or thrift offer no discipline to the managers. This lack of market discipline not only makes it easier for poorly managed institutions to operate, it also makes business difficult for prudent managers who compete with poorly managed institutions for both loans and deposits.

Pros and Cons of a Federal Role in Deposit Insurance

Deposit insurance is generally recognized as having been quite successful in eliminating banking panics and the credit contractions and recessions associated with such panics. However, some have argued that the current problems in the banking and thrift industries reflect a fundamental danger in having the Federal Government extend a broad blanket of protection over deposits—a danger that can only be eliminated by curtailing the government's role.

These observers contend that well-organized political pressures to forbear in closing insolvent institutions, to extend the insurance guarantee to uninsured depositors, and to underprice coverage all undermine regulatory supervision. In the long run, they argue, the nature of our political process and its incentives for government policymakers are inconsistent with a sound insurance operation. In this view, the recently exposed flaws in Federal deposit insurance policies are no accident. They reflect a basic bias in the political process.

Another argument made against Federal deposit insurance is that government regulation and supervision are inherently less effective than market forces in balancing risk with depositor protection. Although regulators may be competent, dedicated, and well-intentioned, their incentives to monitor banking institutions carefully are unlikely to match the incentives for monitoring that the private sector is able to generate. Moreover, private market participants are unlikely to be subject to political pressure that may result in costly delays or inaction.

Supporters of continued Federal involvement in deposit insurance argue that because the potential liabilities are so large, only Federal insurance is credible. Depositors, they say, simply will not be so certain that the private market will be able to guarantee their deposits, and that uncertainty can lead to the kind of bank panics that the Federal deposit insurance system has so successfully eliminated. It is also argued that a private deposit insurance system would not appropriately assess the risks to check clearing and interbank fund transfer systems and to the overall economy that might be associated with the forced closure of very large institutions.

These analysts also argue that the lack of market discipline inherent in deposit insurance can be adequately controlled while retaining the Federal guarantee. They believe that the deficiencies in the current system can be corrected by improving oversight and supervision, by offsetting incentives to take undue risks with stronger penalties for excessive risk-taking, by requiring banks and thrifts to hold more capital, and by intervening sooner to minimize losses at failing institutions.

Many other nations also have deposit insurance systems, but there are significant differences in form, and some systems are even administered by the private sector (Box 5-2). Because many of the systems are relatively new and have not faced a severe test, it is difficult to compare the efficacy of alternative systems.

Should Some Banks Be Considered Too Big to Fail?

Some observers argue that the Nation's largest banks are too big to fail. A run by uninsured depositors on the largest banks would have consequences for the overall economy so severe that they outweigh all other considerations, they argue. The principal concerns are systemic problems associated with the payments system and the possibility that such a run on a large institution may lead to runs by uninsured depositors on other large institutions. Hence, if one of the largest banks were to become insolvent, these observers would advocate protecting both insured and uninsured depositors, while the owners would lose their investment in and control over the bank.

Box 5-2.—Alternative National Deposit Insurance Systems

At least 18 of the 24 members of the Organization for Economic Cooperation and Development have national deposit insurance systems, but few of them work exactly like the Federal Deposit Insurance Corporation in the United States. There are broad differences in the roles of the systems, who administers them, the extent of insurance coverage, and membership and funding methods.

Deposit insurance systems are administered in three different ways. Some, like the FDIC, are officially sponsored and administered by the government. Generally, other government-sponsored national deposit insurance systems do some regulation, but they do not have the extensive supervisory and examination roles of the FDIC. There is wide variation in the degree of autonomy these insurance agencies have from the central bank and treasury or finance ministry. Privately administered insurance systems are about as common as government-sponsored systems. A few countries maintain systems that are jointly managed by the public and private sectors.

The majority of national deposit insurance systems have some fixed ceiling of coverage for deposits. Most systems have a lower ceiling than the United States. Some nations, such as the United Kingdom, use a system in which only a fraction of deposits is insured. Many systems implicitly provide coverage for uninsured deposits by encouraging mergers between healthy and failing institutions.

National deposit insurance systems are funded in one of two ways: collection of periodic premiums before any losses are incurred, or monetary assessment of members when a loss is incurred. The FDIC is an example of the first method; member banks are required to contribute a certain percentage of deposits to an insurance fund each year. The United States has the highest premium of any major industrial country that charges premiums. No system makes use of risk-based premiums, designed to reflect differences in the financial health of institutions. Some systems receive additional financing from central banks, government treasuries, or both, and most have arrangements with their governments to borrow funds when needed.

Others argue that no bank should be considered too big to fail. They contend that such a policy weakens the market discipline applied by uninsured depositors and other creditors and thus encourages undue risk-taking by the biggest institutions. This argument implies that the total cost of "bailing out" a large institution on

the brink of failure is hard to measure, since in addition to the immediate cost of the bailout, one must also consider the increase in the potential cost of future bailouts that become more likely as a result of the initial bailout. Opponents of a too-big-to-fail policy also argue that a policy of effectively extending insurance coverage to uninsured depositors of large institutions gives these institutions an unfair advantage over smaller institutions.

The too-big-to-fail dilemma comes down to a conflict between principle and practicality. If the cost of bailing out an insolvent institution is clearly exceeded by the likely costs to the overall economy of allowing it to fail, then even if one agrees in principle that no institution should be considered too big to fail, it would be impractical to allow the failure. The key to resolving this conflict is to minimize the costs of such failures. Potential costs associated with systemic risks to the payments system have been greatly reduced by recent improvements in the public and private payment systems. Contagious uninsured depositor runs are less likely if uninsured depositors have confidence in other large banks. Banking reform that provides for the accurate measurement of capital and prompt corrective action before institutions are on the brink of failure should significantly reduce the possibility that the public would lose confidence in several large institutions at the same time.

DEPOSIT INSURANCE REFORM: INDUCING MARKET-BASED INCENTIVES

Under the current system of deposit insurance, incentives on the part of poorly capitalized banks and thrifts to take undue risks must be constrained by regulation. In essence, examiners must question the decisions made by management. *Prudent management from the bank or thrift owners' perspective differs from prudent management from the regulators' perspective.* Regulators want to hold down costs to the insurance fund by minimizing the likelihood that the institution will fail. Institution owners want to maximize the value of their wealth.

For weak institutions, particularly those on the verge of failure, these divergent goals lead to clear conflict between regulators and management and require the imposition of tight and detailed regulatory constraints. The managers are trying to get funds out of the institutions and to the owners, while regulators want to keep funds in the institution to reduce the cost of failure to the insurance fund. Managers inevitably have superior information, and regulators thus face a task that is both difficult and critical.

The level of regulation and pressure on regulators might be reduced if the incentives of owners and the deposit insurer were more closely aligned. Before considering possible means to this end, it is important to emphasize that *a reduction in the regulation of* *depository institutions does not imply a reduction in their supervision.* The distinction needs to be clear. Regulations specify what types of activities institutions can and cannot engage in. Supervision entails observing what an institution does, but intervening only when the actions taken expose the institution to undue risks that could threaten the solvency of the institution. Thus, a healthy, well-capitalized institution might be allowed great flexibility but would still be carefully supervised. In fact, reduced regulation might on balance entail more, not less, supervision.

Limiting the Scope of Deposit Insurance

Insured depositors have little incentive to monitor the managers of depository institutions. However, uninsured depositors and nondeposit debtors of a bank or thrift do have incentives to monitor managers, since their claims on an institution are at risk if the institution fails. The ability and incentive to withdraw funds as riskiness increases serves, in turn, to discipline managers. Thus, *one way to increase market discipline is to limit the scope of deposit insurance and thereby force banks and thrifts to rely more heavily on uninsured sources of funds.* Limiting the amount of deposits insured would also limit any potential liability of taxpayers if an institution fails.

Currently, deposit insurance covers up to $100,000 per depositor at each institution. By using trust arrangements, joint accounts, and a variety of other arrangements, however, a depositor can easily insure many times this limit at a single institution. In addition, a depositor can have insured accounts at any number of different institutions. Thus, depositors can have considerably more than $100,000 protected by the deposit insurance safety net.

Several ways of limiting insurance coverage have been suggested. First, the amount of coverage that a depositor can obtain at any one institution could be limited more effectively. This approach is broadly consistent with the notion that deposit insurance should protect only small depositors. It is also likely to reduce the aggregate amount of insured deposits and thus reduce potential taxpayer liability for failures and increase the use of noninsured sources of funds by banks and thrifts. Uninsured depositors or debtholders would exert beneficial discipline on management. An expanded version of this approach would limit the coverage that a depositor can obtain system-wide. This approach, however, would present some administrative problems since information on total deposits held by an individual in all insured institutions is not readily available.

Second, institutions could be prohibited from offering interest rates on insured deposits that are significantly higher than market rates on comparable claims such as U.S. Treasury bills. Such a system would not constrain the use of insured deposits by well-capitalized institutions, but it would help prevent weak institutions from gambling for resurrection by using funds obtained by offering above-market rates on insured deposits. Compared with the first approach, this approach would probably result in less reduction in the aggregate amount of insured deposits, so potential taxpayer liability for failures would be higher, and banks and thrifts would rely less on uninsured sources of funds.

A third approach would effectively require institutions to designate particular assets as collateral for insured deposits. Well-capitalized institutions might be allowed to use almost any type of asset as collateral. Poorly capitalized institutions would be required to use only relatively safe and easily marketed assets as collateral. Such a system would not restrict well-capitalized institutions but would constrain the types of risks poorly capitalized institutions could take using insured deposits.

It is important that any limitations on the scope of deposit insurance be implemented gradually. Such limitations may reduce the aggregate amount of deposits and thus the funds available for lending by banks and thrifts. Also, to the extent insured deposits are replaced by uninsured deposits, runs by uninsured depositors may become more likely. Historical experience with rapid reductions in deposits during the "credit crunches" of the 1960s and 1970s and during banking panics that took place before the introduction of Federal deposit insurance shows that rapid contractions in the aggregate amount of deposits can have severe implications for the economy.

Although alternative sources of funds for borrowers exist, these sources cannot be expected to grow at the rate that would be required to supplant such a sudden, sharp reduction in lending. If banks and thrifts are given time to develop sources of funding other than insured deposits, they may continue to compete effectively with a less comprehensive safety net. If that is the case, then reducing the scope of deposit insurance coverage may have little effect on aggregate bank and thrift lending. Thus, any such reform must be very careful to provide for a gradual phase-in.

Prompt Closure

A second way to tap the forces of market discipline is to close institutions promptly when their capital levels fall to zero. That, however, is easier said than done. Even though prompt closure may be a goal, inaccuracies in the measurement of capital will ultimately make it nearly impossible to know when an institution's capital reaches exactly zero. Moreover, since capital measurement is not an exact science, banks and thrifts are very likely to challenge closure decisions involving measured capital levels that are close to zero. *The process of prompt closure is more likely to succeed to the extent capital measurement is accurate.*

The more extensive use of subordinated debt by banks and thrifts would also facilitate prompt closure of insolvent institutions. In the event of bankruptcy, claims of subordinated debtholders are honored only after those of uninsured depositors, general creditors, and the deposit insurer. If an institution with subordinated debt were to fail, the deposit insurer would pay off insured depositors or transfer them to another institution, along with cash or assets to compensate the receiving institution for its new deposit liabilities. The proceeds from the sale of the remaining assets would then be used to pay off the general creditors, the uninsured depositors, and the deposit insurer. After they were all paid, anything left would go to the holders of subordinated debt.

Well-managed and well-capitalized banks and thrifts would be able to issue subordinated debt on reasonable terms, but institutions that followed risky or careless strategies would only be able to issue such bonds at very high rates of interest. Thus, the cost of these funds would be responsive to how well a bank or thrift was being managed. Since they would suffer losses before the deposit insurer, subordinated debtholders would exert discipline on management that would be consistent with the protection of the deposit insurance fund. Moreover, they would provide a countervailing force to offset political pressure on regulators to forbear. In essence, holders of subordinated debt would represent a market force that would help ensure safety and soundness in the banking system by rewarding good management and penalizing poor management.

Private Reinsurance of Deposits

A third way to induce market discipline is to set up a system in which the private sector would reinsure a fraction of deposits. The Administration has recommended that the FDIC adopt a demonstration project to determine the feasibility of privately reinsuring deposits. Such a system would introduce private monitoring of risks and market incentives into both the determination of deposit insurance premiums and closure decisions. Under such an arrangement private insurers would bid for the right to cover a *pro rata* fraction (perhaps 5 or 10 percent) of depositor losses for a given institution, and the government insurance fund would cover the remainder. The percentage of private deposit insurance could vary inversely with institution size, so that the amount of deposits privately insured in any one institution would be of sufficient size to warrant careful monitoring by the private insurer but not so large as to limit severely the pool of firms that could provide insurance.

The government fund would set its premium for each institution after considering the premium rate charged by the private insurer and thereby benefit from the pricing analysis performed by the private market. The terms of the private insurance contract would allow readjustment of insurance premiums if the riskiness of the insured institution changed. When a private insurer altered its premium, the Federal insurer could follow. To reduce the cost of providing insurance, private reinsurers presumably would share information obtained in supervisory examinations.

Private reinsurance of deposits might be one way to capture many of the benefits claimed for private insurance. Independent sources of private capital would be at risk, and thus market forces would be involved in both monitoring bank and thrift performance and setting premiums. Of course, if private insurers are to have the appropriate incentives in assessing the risks inherent in insuring deposits, they must expect to bear the full cost of any mistakes they might make in assessing the financial condition of the institutions they reinsure. Thus, private deposit insurers would have to be required to be very well-capitalized.

Private insurers would also have incentives to develop accounting and control systems that would minimize the cost of deposit insurance. Market signals of growing problems at an institution also could be used to trigger government interventions up to and including closure.

A considerable benefit from this system would be the interaction between the private and public sector insurers. This interaction may facilitate the evolution of banking. As the private insurers gain experience in assessing and monitoring the risks faced by depository institutions, they, in conjunction with the government insurer, might propose innovative new insurance products. These products might trade off premium rates with restrictions on banking activities, closure policies, or asset portfolio choices. For example, an insured institution might commit to avoid certain risky practices in exchange for lower insurance premium rates. Instead of expending energy trying to circumvent regulations, part of the private sector would have the incentive to try to design efficient regulatory schemes.

REMOVING REGULATORY OBSTACLES

The high levels of inflation and resulting high interest rates that were the primary cause of the S&L crisis did not have a similar effect on banks. Because the loans they made were usually short-term and had adjustable interest rates, banks were not very exposed to interest rate risk and thus were not hurt significantly when rates rose. The recent downturn in the economy and, in particular, real estate has taken its toll on banks and has resulted in some failures. Moreover, the rate of bank failures rose throughout the preceding economic expansion. Given increased competition in banking, a rise in the failure rate is not surprising. But continued stress within the system indicates that it is time for a reevaluation of existing regulation of depository institutions.

Safety and Soundness Through Interstate Banking

One of the most obvious ways to increase the safety and soundness of banks and thrifts is to allow them to spread their risks by diversifying their loan portfolios. However, laws and regulations restricting interstate banking and branching inhibit this diversification.

The rationale behind restrictions on interstate banking is similar to the rationale against branch banking within States. Rural communities have traditionally opposed branching because they feared that urban branch banks would funnel deposits from rural into urban areas, leaving rural areas with no sources of loans. Likewise, States did not want national banks to ship deposits to neighboring States.

Restrictions on branching and interstate banking, however, have not kept deposits from flowing across community and even State borders. Although smaller community banks and thrifts do lend locally, on average they find that they take in more deposits than they can lend profitably. Instead of making unprofitable loans locally, these institutions lend some funds to larger institutions, which in turn use these funds to finance loans elsewhere. Regardless of branching restrictions, banks and thrifts only make loans that appear to be profitable. Likewise, large institutions do not forgo profitable lending opportunities just because they are in small communities.

Geographic restrictions not only have failed to serve their intended purpose, but they have occasionally hurt the local communities they were meant to protect. When local economies are hit by periodic economic downturns, local banks and thrifts suffer loan losses, which reduce their capital and consequently require them to contract their lending. If local banks or thrifts are the only sources for loans, even for borrowers who are still in good financial condition, this contraction in lending might exacerbate the local economic downturn. On the other hand, a well-diversified bank or thrift could easily absorb loan losses in a single community and thus continue to be able to lend to creditworthy borrowers there.

Many of these geographic restrictions are gradually being eroded. At the end of 1990, all but four of the States allowed bank holding companies of other (but not necessarily all) States to acquire banks in their State. Most of these laws extend such opportunities after a specified date to banks from any State that offers reciprocal treatment. Important limitations on interstate branching still exist, however. Although a holding company may own banks in several States, each bank must be separately organized and capitalized. This limitation creates redundant costs and reduces the benefits of geographic diversification. *To the extent that interstate* *branching restrictions still prevent banks and thrifts from diversifying efficiently, they are obstacles to the efficiency, profitability, safety, and soundness of the financial sector. Accordingly, the Administration will propose legislation to allow interstate banking and branching.*

Improving Efficiency in Financial Services

It is impossible in the United States for consumers to obtain a full range of financial services from any single institution. Continuing Federal constraints bar depository institutions from offering certain financial services and prohibit nonbank financial service companies from offering deposit and checking services. A company that wants to raise money may go to its banker for a loan but has to go to an investment bank for help in issuing new equity.

Other industrialized countries have financial systems that are more integrated than that of the United States. Germany, for example, has more than 300 "universal" banks, which are allowed to offer a full range of banking and financial services. These institutions may accept deposits, make consumer and commercial loans, underwrite and trade securities, and provide investment counseling. The United Kingdom also has a universal banking system. Many British banks form subsidiaries for certain activities, but bank solvency is usually assessed on a consolidated basis. In contrast to the U.S. banking system, British and German banks are not required to use a holding company structure or "firewalls" between departments performing diverse functions. Under the Second Banking Directive of the European Community (EC), EC banks will be able to operate throughout the Community after 1992, which is expected to spread the practice of universal banking throughout Europe.

The Administration believes that to remain competitive in the world market for financial services, *U.S. financial firms must be able to affiliate in financial service holding companies and be allowed to offer a full menu of financial services*. Potential synergistic relations among affiliates that might lead to more efficient delivery of financial services by eliminating redundant costs should not be constrained. However, different financial affiliates in the same holding company should be separately capitalized, and their financial ties should be sufficiently segregated so that any problems that might arise in one affiliate do not spill over into the others. In particular, depository affiliates must be structured so that depositors and the deposit insurance fund are insulated from risks taken by other affiliates of the holding company. In constructing such legal firewalls, it is important that the synergistic benefits of offering full product lines are not lost in the process.

Commercial firms offer a potentially large source of new capital and innovative ideas to a restructured financial services industry.

Commercial firms are already allowed to affiliate with savings and loans. It has been argued that potential synergies and efficiencies can be gained from combining commercial firms with other financial institutions.

For example, banking relies heavily on information processing. Competitive banks and thrifts in the future will inevitably depend on advanced information processing technology. The affiliation of depository institutions with firms with expertise in information processing would likely lead to improvements in the information processing technology upon which banks rely. More advanced automated teller machines, increased use of optical scanners in check processing, and closer monitoring of information related to outstanding loans are just a few of many potential advances.

Historically, commercial affiliation with banks has been resisted for two primary reasons: fear that economic power would become too concentrated, and concern that financial problems in the commercial firm could jeopardize the safety and soundness of the bank. These concerns have been heightened by the recognition that banking regulators could not be expected to monitor effectively the activities of commercial firms.

While these concerns are legitimate, a total prohibition of affiliation between commercial firms and banks is not warranted. *The Administration proposes to allow commercial firms to affiliate with banks. Concerns regarding commercial affiliation would be addressed by constructing legal firewalls and by monitoring and regulating the transactions between the commercial firm and the bank.* In particular, the bank and the commercial company would be barred from engaging in financial dealings that could be construed as indirectly providing the commercial company benefits arising from the bank's access to Federal deposit insurance.

FEDERAL CREDIT PROGRAMS

The Federal Government is the country's largest supplier or guarantor of credit. By 1990 it had $210 billion in outstanding direct loans, $630 billion in outstanding guarantees of loans made by private lenders, and $855 billion in outstanding loans or guarantees made by government-sponsored enterprises (GSEs), privately funded businesses that make or repackage and sell loans in specific markets. Measured in net terms (loans minus repayments), Federal loans and guarantees accounted for 20 percent of all funds raised in the United States in fiscal 1990. The bulk of Federal credit supports housing, while smaller amounts are directed toward agriculture, business, and education.

The vehicles for providing Federal credit have changed substantially in the last decade. Federal loan guarantees and GSE credit market activities increased over the 1980s while direct Federal lending fell substantially. As recently as 1985, $52.8 billion in new direct loans were made; by the end of 1990 the volume of direct loans had declined 68 percent.

The Need for Federal Credit Reform

Important reforms in the Federal Government's direct role in credit markets occurred in 1990. *Before the reforms, the deficit or surplus figures in the Federal budget never recorded the true costs of Federal credit programs.* Because credit budgeting was based on cash flows, a direct loan was treated just like an expenditure even though a loan that did not default, unlike an expenditure, would be repaid in subsequent years. These repayments were then recorded as collections when they were received.

Loan guarantees, an alternative way to provide credit assistance, did not appear to cost the government anything at the time the guarantee was made. Since no initial outlays were associated with a guarantee, it was not reflected in the budget unless the borrower defaulted, and then only in the year of the default. This treatment of credit programs in budget accounting, along with increasing pressure to reduce the Federal deficit, partially explains the shift in emphasis from direct to guaranteed loans since the mid-1980s.

As long ago as 1967, the President's Commission on Budget Concepts recognized that the budget did not adequately measure the costs of Federal credit activity. The Commission recommended that the budget include only the subsidy cost of direct loans, rather than their disbursements and subsequent repayments. Thus, if the full costs of a loan, including expected default and administrative costs as well as the government's interest costs, were expected to be completely repaid, the loan would be recorded as an expenditure of zero. However, because it was believed that financial techniques were not able to measure subsidies accurately, this recommendation was never fully implemented, and was soon abandoned entirely.

Because the budget has not explicitly reflected the subsidies associated with loan programs at the time credit is extended, few attempts have been made to compare the costs and benefits of Federal credit programs with each other or with other programs. There are some warning signs, however, that these programs may have problems. In 1988 the government added a significant amount of capital to and restructured the bankrupt Farm Credit System. Student loan defaults reached 15.6 percent in fiscal 1988, and Veterans Administration loan defaults have more than tripled from fiscal 1981 to fiscal 1988. In 1989 the General Accounting Office (GAO) reported that Federal Housing Administration losses were five times higher than their fiscal 1988 financial statements had estimated.

Previous Federal accounting and administrative practices may have hindered effective oversight of credit programs. Some agencies rolled over their debt, paying off delinquent loans by issuing new loans. Other loans were kept on the books long after the borrower had defaulted. Some Federal lenders were audited only infrequently. Until a recent GAO audit, for example, FHA books had not had a complete, outside audit for 14 years.

The Federal Credit Reform Act of 1990

The Federal Credit Reform Act of 1990, which the Administration strongly supported, is intended to measure more accurately the costs of Federal credit programs, make the budgetary treatment of credit programs equivalent to that of other Federal spending, match benefits to the needs of borrowers, and improve resource allocation among credit programs and between credit and other spending programs. *Under the new law, subsidy costs are separated from the unsubsidized cash flows of Federal credit programs and, for the first time, the subsidies, and only the subsidies, are included in the budget.*

Beginning in 1992 the government will maintain three types of accounts for each Federal credit program: liquidating, program, and financing accounts. The liquidating account will display cash flows for loans obligated or guarantees committed before fiscal 1992 and thus will not be subject to reformed budgetary treatment. The program account will display the subsidy costs and administrative expenses of new loans and guarantees, and the nonbudgetary financing account will record the cash flows associated with this new credit. Separate financing accounts will be maintained for direct loans and loan guarantees. The costs of new loans and guarantees measured in the program accounts will be included in the budget.

The Credit Reform Act will place the costs of credit programs on equal footing with direct expenditures. That will help policymakers make the best use of Federal resources. In addition, this reform will help Federal agencies operate credit programs on a more fiscally prudent basis.

Reforms of Government-Sponsored Enterprises

Other new legislation, passed in 1990, began the process of reforming GSEs. The activities of GSEs are often closely related to other Federal credit programs. For example, a large GSE, the Student Loan Marketing Association, or "Sallie Mae," purchases federally guaranteed student loans from private lenders and sells new securities based on these loans. By converting private contracts into securities available to the general public and by providing subsidies, GSEs increase the amount of capital available to finance investment in the relevant markets, particularly housing and education, though they also presumably displace some private financing that would otherwise be available. In some cases, GSEs have also played an important role in bringing new financial instruments to the market.

GSEs benefit from their special relationship with the government. Although debt securities of the GSEs and their securitized loans receive no explicit government guarantee, their Federal charter and other privileges lead to a perception that the government would come to their rescue in time of trouble. The government has not discouraged this perception and has reinforced it by its response to the financial troubles of the Farm Credit System. This implicit guarantee allows GSEs to borrow at low interest rates, near those of Treasury securities. In addition, some GSEs are exempt from the Federal corporate income tax, most are exempt from State and local income taxes, and most do not have to register with the Securities and Exchange Commission.

There are certain parallels between GSEs and the thrift industry. At the end of 1990, GSE liabilities were roughly the same size as savings and loan deposits. GSEs and thrifts benefit from implicit or explicit government guarantees of their liabilities, which allow them to borrow substantial amounts with only a very small base of equity. GSEs have some of the lowest capital ratios of any domestic financial intermediaries. Like thrifts, GSEs are legally required to serve the credit needs of particular markets, and they are unable to diversify their investments among different sectors of the economy.

Despite these similarities, GSEs thus far have shown few signs of trouble, perhaps because most were not as exposed as S&Ls were to losses caused by increases in interest rates. Nevertheless, the Administration, recognizing that GSEs have the potential for problems, has taken several steps to ensure that they remain financially sound. In May 1990 the Department of the Treasury proposed four principles to govern GSEs: They should maintain adequate capital; they should be sound enough to achieve the equivalent of an AAA bond rating in the absence of any implicit guarantee; the government should eliminate any potential conflicts of interest in GSE regulation; and GSEs should disclose the economic value of their relationship to the Federal Government.

The Budget Enforcement Act of 1990 takes additional steps to ensure the financial soundness of GSEs. The Treasury Department is required to submit a study, along with proposed legislation, by April 30, 1991. This study will provide an objective assessment of the financial soundness of GSEs, the adequacy of the existing regulatory structure, the financial exposure of the Federal Government, and the effects of GSEs on Treasury borrowing. The Congressional Budget Office (CBO) is also required to present a report by the same date. The CBO study will focus on many of the same issues and report on alternative regulatory and oversight mechanisms for GSEs. By September 15, 1991, the committees of jurisdiction must report legislation in the House of Representatives to ensure the financial soundness of GSEs and to minimize the possibility that a GSE might require future government assistance. The Senate will then do the same. Finally, the President's annual budget message must include an analysis of the financial condition of GSEs and the financial risks to the government posed by GSEs.

SUMMARY

- Legislative reform that recognizes the rapidly changing nature of the financial sector is essential to ensure a sound and safe financial system.
- Comprehensive reform of financial institutions is needed to increase the flexibility and competitiveness of the financial system.
- A financial sector that is inefficient and inflexible cannot meet the overall needs of the economy. Financial institutions must be free to exploit synergies and economies of scale and scope where they exist.
- Regulatory reform should be adaptable to future changes in the economic environment. Market forces should be harnessed to help ensure the safety and soundness of the financial system.
- The November 1990 budget law substantially reforms the budgeting for Federal credit programs, altering the treatment of direct and guaranteed loans and taking steps to reduce the potential risks to taxpayers from GSEs.

CONCLUSION

The financial sector is faced with a number of challenges that have arisen in recent years as the economic environment has changed. The unexpectedly high inflation in the 1970s and the resulting rise in interest rates represented a significant shock to the financial system; together these factors were the primary underlying cause of the S&L crisis. Reform of the S&L industry has been initiated with the FIRREA law.

The recent budget agreement included important provisions to ensure that Federal credit programs use their resources more efficiently. The Treasury Department is preparing a proposal to ensure that GSEs remain financially sound.

The financial sector has made essential contributions to economic growth and development throughout the history of the Nation. To allow the sector to continue to thrive and to play a vital role in future economic growth, significant reform of the regulatory structure governing the financial sector is necessary. The Department of the Treasury's recently released study of Federal deposit insurance and regulatory reform discusses these issues in detail. The Administration's legislative proposals reflect the findings of that study and the policy principles outlined in this report and discussed in this chapter.

Comprehensive reform requires the reform of deposit insurance and the removal of regulatory obstacles that hamper the flexibility, efficiency, profitability, and safety of banks and thrifts. Deposit insurance should be structured to increase market discipline, which leads to prudent management of banks and thrifts. The Administration proposes to remove obstacles to interstate banking and branching that effectively make banks and thrifts less safe by constraining their ability to diversify their loan portfolios and sources of deposits. Constraints on combinations of various types of financial service firms hamper efficiency by necessitating parallel facilities that create redundant costs. These constraints reduce the flexibility and competitiveness of U.S. institutions in the global arena and should also be eliminated.

CHAPTER 6

Economies in Transition Around the World

THE REMARKABLE WORLDWIDE MOVEMENT toward reliance on competitive market forces continued during 1990. Fundamental reforms were put in place in several Eastern European countries. Dramatic economic and philosophical transformations were also under way in many nations in the Western Hemisphere. Many countries were embracing democracy, discarding their centrally controlled or state-dominated economies, and moving toward systems in which private ownership of property predominates and most resources are allocated through markets. The pace of change has been great, but events in 1990 also demonstrated that the task of transforming failed economies is formidable. This chapter focuses on the transformation process as it is unfolding in Eastern Europe and Latin America.

The transitions under way in Eastern Europe reflect the failure of command systems to provide either political freedom or a decent standard of living. The massive historical experiment conducted throughout the 20th century that contrasted market-oriented and centrally planned economies has ended with the economic failure of communism. A little over three decades ago Nikita Khrushchev, then Premier of the Soviet Union, boasted "We will bury you," in reference to the alleged superior economic performance of the Soviet Union. Today, although accurate comparisons are difficult, recent estimates of per capita gross national product (GNP) in the Soviet Union have been as low as $1,780, less than one-tenth of per capita GNP in the United States. The contrast between the two systems in Germany is even more stark. Starting from the same point at the end of World War II and sharing a common culture, East and West Germany went two different ways. West Germany achieved one of the highest standards of living in the world, while East Germany became an industrial wasteland with rundown, outmoded factories and a poisoned environment.

Renewed respect for democracy and market forces is also sweeping the Western Hemisphere. A "quiet revolution" in the way that Latin American policymakers seek solutions to their countries' complex problems has taken hold. Almost every country in the region has begun to move away from policies, pursued for decades, that discouraged trade and gave government an extensive role in the economy. Instead they are turning toward economies less controlled by government and more reliant on market forces. The President has recognized the tremendous opportunity presented by these changes with his Enterprise for the Americas Initiative, which is aimed at expanding trade, investment, and growth in the hemisphere, as well as with his commitment to conclude a free-trade agreement with Mexico.

Change also has become apparent in other regions. Nations as diverse as New Zealand, Benin, and Mongolia engaged in debates about far-reaching market-oriented reforms. Several African countries have adopted programs that encourage private markets and reduce government management of the economy. A push for privatization in the mid-to-late 1980s reversed the trend toward increased state control of the economy in Western Europe, with the United Kingdom and France leading the way. The success of the newly industrializing economies of Asia—Hong Kong, Singapore, South Korea, and Taiwan—has offered strong evidence of the gains from outward-looking policies that reward entrepreneurship.

These worldwide changes promise to settle intellectual debates that have persisted for decades. During the 1960s and 1970s the "convergence hypothesis" held that the capitalist and communist systems would eventually evolve toward each other, with the final result a hybrid of the two systems. In Latin America, it was argued that policies that insulated the economy from world markets and expanded the role of government would promote quick industrialization. It is now unmistakably clear that these hypotheses have been rejected. The developed market economies are clearly not evolving toward socialism, and the leaders in Eastern Europe and Latin America are not trying to find a hybrid "third way." These leaders instead push for market-oriented economies with individual choice and private property rights as the foundations of progress and prosperity.

It is impossible to predict the speed or even the eventual outcome of the reforms now under way. The collapse of communist and military dictatorships presents enormous opportunities to improve living standards for hundreds of millions of people, but those opportunities come with no guarantees of quick success. As command systems collapse, they must be replaced with systems that provide appropriate incentives to producers and consumers. Fundamental reform needs time to work, and dislocations are inevitable.

Economic change can be difficult even in well-developed market economies, as was discussed in Chapter 4. Change is even more difficult when it is dramatic and revolutionary. In emerging democracies, economic transformation must make its way within the context of policy debates that accompany the expansion of political freedom. These debates may slow the reform effort at times, or even create backlash against the reforming government, but they impart legitimacy to the new economic system. If governments are to build and sustain popular support for market-oriented reform, there must be widespread understanding of how much there is to gain and realistic expectations about the difficulty of the task ahead. In the longer run, history strongly suggests that decentralization of economic power in a free-market economy will support both prosperity and democracy.

FORCES FOR CHANGE

The pressure for market-oriented change was reflected clearly in developments in Eastern Europe and Latin America during 1989 and 1990. In Eastern Europe, 1989 closed with Poland and Yugoslavia planning ambitious adjustment programs that were put in place in early 1990 and that quickly reduced high inflation rates, stabilized foreign exchange rates, and eliminated shortages. East and West Germany were unified on October 3, 1990, less than a year after the fall of the Berlin Wall in November 1989. By the end of 1990, both Czechoslovakia and Hungary had announced plans to accelerate their reform efforts. In Latin America, Chile's new democratic government took office in March 1990 committed to continuing the country's program of economic reform. Mexico's current government accelerated reforms that were begun in the mid-1980s, while Argentina, Peru, Venezuela, and a number of other countries initiated significant market-oriented reforms.

The fall of the Berlin Wall and the events that followed raised hopes and expectations around the world. *More than anything else, the undying and universal desire for political freedom motivates the tremendous upheaval in Eastern Europe and the ongoing struggle for democracy in Latin America.* But the denial of economic freedom also crystallized discontent. The yearning for economic freedom has been evident in the vibrant underground economies of South America, where enormous amounts of effort are devoted to avoiding onerous regulations and licensing requirements. The simple freedom to make choices in everyday life has a value beyond its positive effects on living standards.

THE FAILURE OF ECONOMIC POLICIES

A fundamental motivation for change in Eastern Europe and Latin America was the failure of their economies to perform adequately. *The economic policies followed in these countries failed because they were unable to provide adequate incentives for producers to supply efficiently the goods and services that consumers wanted to buy.* In a well-functioning market economy, producers must make goods that consumers want; otherwise, their products go unsold and their businesses fail. Producers also have an incentive to produce those goods efficiently—that is, at the lowest possible cost for a given quality—because they can keep the savings gained by reducing costs. If demand increases, prices rise, encouraging producers to produce more and consumers to consume less. If demand falls, the process happens in reverse. In smoothly functioning markets the price moves to equate, at the margin, the value consumers place on the goods they purchase with the value of the resources used to produce them. This process, repeated for countless goods and services, ensures that the economy's scarce resources are used efficiently to satisfy consumer needs and desires.

Interference in the operation of the market breaks this crucial link between producer cost and consumer value. In Eastern Europe and Latin America, widespread use of price controls, reliance on inefficient public enterprises, extensive barriers to competition with the rest of the world, and government regulation of production and investment have all obstructed the normal operation of markets. The lack of enforceable property rights, whether through legal restrictions in Eastern Europe or through inadequate protection in Latin America, severely limited incentives for entrepreneurs.

In Eastern Europe, production levels were, until recently, decreed by central plans. Consequently, there was no reason to expect that the output produced met the wants or needs of the population. Surpluses and shortages occurred regularly, but managers had little incentive to adjust their production as long as quotas were met. Government investment choices caused chronic underproduction of consumer goods, leading to widespread rationing and long lines at shops. Incentives to innovate were almost completely absent, except in the defense sector. But the command economies proved unable to transfer their high levels of defense technology into improvements for consumers.

Production and investment controls were less extensive in Latin America than in communist regimes, but government intrusion into economic decisions was still pervasive. As in Eastern Europe, inefficient public monopolies were common, and public funds were channeled into favored industries regardless of the economic consequences. High tariffs and nontariff barriers protected inefficient enterprises. The proliferation of government-owned firms combined the natural inefficiency of monopoly with the waste and misallocation too frequently found in public enterprises.

Price controls and subsidies have been common in both regions. Where prices were set administratively, they were usually poor guides to the efficient allocation of resources. Price controls on agricultural products have kept food prices down but reduced output. Subsidies in Latin America and Eastern Europe have distorted production and consumption decisions, leading to shortages and bottlenecks.

The prevalence of inefficient public enterprises and unsuccessful attempts to limit subsidies and other expenditures have contributed to large fiscal and external trade imbalances for many Latin American and Eastern European nations. Many of these countries lack a broad-based, efficient tax collection system and face limits on the public's willingness to hold government debt. Borrowing abroad has proven to be no answer: In the absence of sound policies, large external debts can result in capital flight and discourage foreign investment where it is desperately needed. Large deficits, therefore, lead to pressures for excessive money creation, eventually causing rampant inflation in most countries.

Some economies in both regions were also weakened by the burden of high military spending. Although estimates are imprecise, perhaps as much as a fifth of the Soviet Union's output may have been allocated to the defense sector in recent years. This massive effort, moreover, was ultimately ineffective, as free world governments matched or exceeded Soviet capabilities throughout the 1980s.

REPERCUSSIONS OF ECONOMIC POLICY FAILURES

The impact of these policies on living standards was devastating. Per capita income in Poland is now estimated by the World Bank to be about $1,860, compared with an average of $17,470 in the major industrial countries. In Argentina and Peru, real per capita incomes in 1988 were virtually unchanged from 1965 levels. Mexican real per capita income grew during most of that period, but nonetheless declined after the 1982 debt crisis. Meanwhile, the newly industrializing economies of Asia followed an export-oriented strategy, and real per capita income grew at an average rate of nearly 7 percent a year between 1965 and 1988. Although some of these Asian governments directed private activity using taxes, subsidies, and other means, such interference was far less extensive than in many other developing countries, private entrepreneurship was encouraged, and world prices generally guided decisionmaking.

Over time, the weaknesses of the political and economic systems of Eastern Europe and Latin America and the contrasting success of market-oriented economies became readily apparent. Once momentum for fundamental change began to build, ideas flowed easily across national borders. The information technology revolution allowed ideas to spread more quickly than ever (for example, most East Germans could receive West German television before the Berlin Wall fell) and created pressure for change that overwhelmed the communist governments of Eastern Europe.

EARLY ATTEMPTS AT REFORM

As the economic problems in Latin America and Eastern Europe worsened, piecemeal reforms were attempted, but these efforts were doomed to failure. Many Eastern European countries experimented with reforms that coupled economic decentralization with partial price decontrol. The premise was that, with reduced central control, state-owned firms would be run as if they were operating in well-functioning markets. Although aggregate planning goals were still announced, individual enterprises could set their own planning targets and were made responsible for output decisions and trade in raw materials and other inputs. In addition, the system of price controls was made more flexible, and some small-scale private enterprise was allowed.

These early reforms went furthest in Hungary during the 1980s, where they helped create a sector of small-scale private businesses. They were also attempted to varying degrees in Yugoslavia beginning in the 1950s, in Czechoslovakia during 1966–68, and in the Soviet Union beginning in 1987. The People's Republic of China initiated a more comprehensive reshaping of its economy beginning in 1978, which also incorporated decentralization, relaxation of price controls, development of a small private sector, significant tax reforms, and the partial reopening of the economy to international trade (Box 6–1).

Early reform efforts by Latin American countries typically followed their debt crises of the early 1980s. These reforms concentrated on restoring the confidence of domestic and foreign investors by reducing inflation and the fiscal deficit and improving the trade balance. Argentina and Brazil, for example, both confronted extremely burdensome external debts, recessions, and high inflation rates. In response they adjusted their currency exchange rates to make their goods more competitive in world markets and initiated various plans to curb the escalation of wages and prices.

In both Eastern Europe and Latin America, *these early efforts failed to produce the desired results, in large part because they did not adequately restore or put in place the foundations of well-functioning market economies.* Private property rights were generally absent in Eastern Europe, severely limiting profit incentives and discouraging entrepreneurship, and state-owned monopolies were retained. In Latin America efforts to reduce trade imbalances were not coupled with policies to remove barriers to competition in domestic markets, to break up state-owned monopolies, or to improve efficiency by privatizing public enterprises. Fiscal deficits continued to run out of control and to generate inflation because enterprises owned and managed by the government had no incentives to control costs, and there was capital flight from many countries.

Box 6-1.—Economic Reform in China, 1978-90

The People's Republic of China initiated a comprehensive reshaping of its economy beginning in 1978. Reforms began in the agricultural sector and were later extended to the industrial sector. Direct planning controls were relaxed, economic decisionmaking was decentralized, more private activity was permitted, and more prices were allowed to be set in markets. In addition, there was a move to open the Chinese economy to world markets. The practice of ordering all firms to remit most of their profits to the state was gradually replaced with a broad-based system of taxes on profit. Low marginal tax rates were used to encourage investment and provide incentives for management and workers to take efficiency-improving measures.

Chinese reform produced important successes. Agricultural output grew at an annual rate of 8 percent from 1979 to 1984 before slowing, compared with an annual growth rate of 2 percent from 1958 to 1978. The share of state enterprises in total production fell from 81 percent to 60 percent between 1979 and 1987, reflecting the greater dynamism and growth of private enterprises. The share of goods subject to mandatory planning and state-fixed prices fell from two-thirds to one-third by 1987. Remaining price controls, however, reduced the impact of the reforms by distorting the input and production decisions of firms. In some cases, local authorities hindered the implementation of reforms. Furthermore, the tragic events in Tiananmen Square in June 1989 and the ensuing political crackdown led to a slowdown in the pace of reform. In some areas, central control was reasserted and the reforms rolled back.

SUMMARY

- The trend toward market-based economies stems in part from clear, historical evidence that government-dominated economies simply do not work well. Even where markets exist, extensive government interference discourages private initiative and can cripple the economy.
- Early attempts at economic reform focused either on decentralizing economic decisionmaking or on macroeconomic stabilization; they foundered largely because they did not include the positive incentives that come from private ownership and competition.

PRINCIPLES FOR ECONOMIC REFORM

There is no established policy package for reform—no universal blueprint exists—so each country must design its own transition to a healthy market economy. A growing consensus has emerged, however, on a number of principles necessary for successful reform: establishing sound fiscal and monetary policies, removing domestic price controls, opening the economy to international market forces, creating property rights and private property, promoting domestic competition, and reforming and limiting the role of government.

No modern economy has completed a successful reform implementing all these principles at once. It has been difficult enough for countries to succeed in implementing one or two of them when others were already in place. Latin American countries began their transitions with more of the elements of a market economy than the countries of Eastern Europe. In both regions, the pace of events has raised expectations that the transformation can occur quickly and easily, but the sheer magnitude of the task indicates that perseverance and patience are required.

MACROECONOMIC REFORMS

Three of these principles—establishing sound fiscal and monetary policies, removing domestic price controls, and opening the economy to international market forces—are often described as macroeconomic reforms because they apply to the entire economy. They are central to creating the conditions for economic stability. They are also essential to successful structural reform in both Eastern Europe and Latin America. In Poland and Yugoslavia, macroeconomic reform has succeeded quite rapidly in reducing inflation to lower levels. But implementing these macroeconomic principles is not, by itself, adequate to produce a healthy market economy. Indeed, without structural reform to introduce a competitive private sector into the economy, macroeconomic reforms will not succeed in restoring sustained growth.

Macroeconomic reforms can produce rapid output growth when the basic structure of a market economy is in place. That is what happened when the West German economy was rebuilt after World War II (Box 6–2). The West German program coupled price decontrol and monetary reform. It succeeded almost immediately in increasing economic activity, leading the way to the postwar German "economic miracle."

Establishing Sound Monetary and Fiscal Policies

Any successful reform effort must involve sound monetary and fiscal policies. Otherwise, producers and consumers lack a firm basis for planning—there is no hope of fostering long-term invest-

Box 6-2.—The 1948 West German Erhard Reforms

At the end of World War II, the German economy lay in ruins. Industrial output in 1948 was one-third its 1936 level because of a massive disruption in production and trade patterns, even though capacity had been increased by capital formation in the intervening years. Economic disruption was aggravated by wartime money creation, pricing controls, and uncertainty about economic policy. Each day vast crowds traveled to the countryside to barter food from farmers; an extensive black market developed; and cigarettes replaced currency in many transactions.

The extensive reform package of June 1948 created a new currency, the deutsche mark. Most currency and bank accounts were converted at a rate of 100 to 6.5, but debts were converted at a rate of 10 to 1. In addition, price controls were lifted on most goods, a restrictive monetary policy was adopted, tax rates were lowered, and incentives were provided for investment. Much of the credit for the reform went to German economic advisers, foremost among them Ludwig Erhard.

These reforms almost immediately established sound and stable macroeconomic conditions. Consumer prices increased 20 percent between June and December of 1948, but inflation then subsided to an average annual rate of just over 1 percent between 1949 and 1959. Goods that had been hoarded or sold only in the black market became generally available. Real industrial production increased 40 percent in the second half of 1948 and grew an average of 11 percent annually between 1949 and 1959. Real GNP and productivity also grew rapidly. But the reform was not painless: unemployment rose from 3 percent in the first half of 1948 to more than 10 percent in the first half of 1950.

Macroeconomic reform could not have produced such impressive results if West Germany after the war had not had key structural elements in place. It had the legal framework necessary for a market economy, many intact businesses, and highly skilled workers and managers. Restrictive fiscal policies in place since 1946 helped set the stage for the reforms to succeed. In addition, the Marshall Plan and private aid from abroad were critical during the initial reconstruction phase. By the early 1950s, however, foreign aid had diminished; robust economic growth worldwide and the Korean war stimulated demand for German exports and fueled economic growth.

ment and economic restructuring in the extremely uncertain climate created by high and volatile inflation.

One lesson from countries that have successfully ended hyperinflation, including West Germany after the war, is that *strong fiscal discipline is critical to ensure price stability*. Otherwise, fiscal deficits arise that increase the pressure to print money. Fiscal success, of course, requires tight controls on government spending and credit policies. In particular, the government must limit the subsidies it gives to consumers and to loss-making state enterprises. State enterprises must face so-called "hard budget constraints"; the government must not cover the losses they may incur. Fiscal discipline will then allow the implementation of a monetary policy aimed at preventing excessive money creation and providing a steady supply of credit to the economy.

Achieving price stability requires establishing effective mechanisms for controlling the growth of money and credit. As a first step, this requires central banking reform, particularly in Eastern European countries. It is widely agreed that the central bank should have a high degree of independence from the central government, so that it can resist political pressures to finance government spending with money creation and can pursue the objective of price stability. Independence could prove particularly important during the transition period, when uncertainty and inflation pressures may require a strong anti-inflation stance, with tough limits on money growth.

In addition, controlling the growth of money and credit requires a sound banking system, as discussed below. Central banks play an important role in monitoring the banking system and in serving as lenders of last resort. Establishing and controlling the total supply of credit to the banking sector will help to ensure that state enterprises face a hard budget constraint. Adequate supervisory capabilities also must be developed early. The collapse of the Chilean financial system in the late 1970s, for example, had its origins in inadequate supervision of external borrowing and domestic lending by Chilean banks.

The tax system should be designed to raise revenues so that the printing press is not used to finance necessary government spending. Such a tax system should limit distortions to prices and economic incentives. Establishing a broad tax base allows marginal tax rates to be reduced. Tax revenue in Latin America is often generated from only a few sources, such as tariffs, and can be highly distortionary. An exception is Colombia, which has one of the most advanced income tax systems in the developing world, with a broad-based value-added tax and sophisticated adjustments for the effects of inflation. Other countries, such as Bolivia, Chile, and Jamaica, are now experimenting with broad-based income taxes, value-added taxes, or excise taxes.

In Eastern Europe, fundamental administrative mechanisms for collecting taxes are largely absent or primitive. The old regime received revenue through its ownership of enterprises and was able to transfer funds through simple accounting entries. As economic decisionmaking was decentralized and private firms increased in importance, government revenues deteriorated. Tax and collection systems will need to be established that can generate reliable sources of revenue for the government as the old sources of funding diminish.

In economies that have suppressed inflation and allocated goods through rationing, the stock of domestic monetary assets outstanding is often unsustainably large. *Where such a "monetary overhang" is present, macroeconomic stabilization requires that it be reduced.* If consumers and producers hold large cash balances, decontrolling prices could lead to an inflationary surge in demand. The government could reduce the monetary overhang by selling real assets, such as housing, or financial assets, such as government bonds. This approach is not confiscatory, may help establish the government's credibility, and creates markets. The privatization of real assets is a high priority, but it may be difficult to sell these assets quickly, as discussed below. The sale of government bonds at market interest rates helps to establish a bond market, which in turn gives the monetary authorities an instrument to control the money supply.

Bonds must be serviced, and so using bond issues to resolve the monetary overhang could worsen the fiscal deficit. During the transition, bond issues may need to pay high real interest rates, which would lead to higher interest payments on national debt. That in turn could cause lenders to be concerned about the government's ability to service its debt. If a government chooses to sell bonds to deal with the monetary overhang, it is critical to adopt monetary and fiscal polices that are both credible and strong.

Because buyers must be assured that government bonds will be serviced in full, governments should consider using whatever assets they have to support these bonds. Countries could use their available resources—such as copper, gold, or future oil revenues—to back bonds wholly or in part. Such bonds would be tradable, and legal mechanisms would be developed to assure the public that the assets would be available to service the debt.

Currency reform is an alternative approach to reducing the monetary overhang; this was the approach postwar Germany used successfully. In a currency reform the central government replaces existing monetary assets with new assets, usually of lesser value. A confiscatory currency reform is a tax on holders of currency and other financial assets. Such a tax will provide few benefits unless it is part of a comprehensive economic reform package. Repeated currency reforms can disrupt economic activity, reduce the government's credibility, and contribute to a loss of confidence and capital flight.

Removing Domestic Price Controls

In economies with extensive price controls, prices bear no relationship to economic value, defined either by domestic costs or by international prices. By comparison, in market economies production and investment decisions are decentralized, and flexible market prices guide economic activity. However, concerns about sharp price increases, particularly for staples such as bread, lead some to suggest delaying price reform, at least until after measures have been taken to deal with the monetary overhang. *The problem with delaying price reform is that output will decline as the command system is dismantled unless the old system is quickly replaced with an incentive system based on accurate prices to encourage efficient production.* Economies in transition thus need early and comprehensive price decontrol.

Wages are a key price that must be liberalized. In a well-functioning market economy, wages are free to adjust so that valuable skills are rewarded and workers are encouraged to shift to occupations and regions where they are most productive. Until enterprises are operating under market incentives, however, they have little reason to set wages appropriately or to restrain their costs. Consequently, to avoid a wage-price spiral during the transition period, temporary and limited restrictions on wage increases in state enterprises may be desirable. Once firms face market constraints, all wage limitations should be eliminated to allow wages to move to their appropriate levels.

Financial markets also should be liberalized so that savers receive an adequate return and investors face correct incentives when making investment choices. As a first step, at least, *interest rates should be positive after adjusting for expected inflation.* Government intervention in financial markets, particularly in Latin America, often led to negative real interest rates and was a major contributor to poor investment decisions and capital flight.

Opening the Economy to International Market Forces

Another key principle of macroeconomic reform is to open the economy to international market forces by establishing currency convertibility and liberalizing trade. Currency convertibility has more than one definition, but here it refers to the ability to trade the country's currency, at market exchange rates, for foreign currency (and goods) either at home or abroad. To say that a currency is convertible does not mean that trade is free. Western industrial countries with convertible currencies retain tariffs and other barriers to trade. Thus, the benefits to a reform program from convertibility of the currency should be thought of as part of the larger process of eliminating restrictions on international transactions.

The transformation to a market economy cannot be successful unless a country's currency is a credible medium of exchange and convertible within its borders. In the Soviet Union today, certain cities and republics restrict ruble purchases by nonresidents and erect trade barriers against each other. Certain deposit accounts are not convertible for currency. The January 1991 Soviet currency reform further reduced confidence in the ruble. These costly distortions are reflections of the fundamental failure of existing economic policies.

Convertibility for international trade and other current account transactions, along with other measures to liberalize trade, is a critical early reform. It increases the range of goods that can be purchased by consumers and producers. It may also expand domestic production by increasing the availability of imported inputs and capital goods. Further, convertibility moves domestic prices toward market-determined world prices, guiding domestic enterprises toward efficient production and investment decisions.

Opening the economy to international market forces also helps create a competitive environment in two important ways. First, it helps expose firms to the discipline of the international market. That is particularly important in smaller countries where the efficient operating scale of firms in some industries is large relative to the size of the domestic market. Without foreign competition, state enterprises in these countries may face little domestic competition at the start of a reform effort, allowing them to remain viable by raising prices at the expense of consumers. External convertibility and trade liberalization therefore are also pro-competitive policies that can enhance productivity.

Second, opening the economy to international forces allows new domestic firms to overcome domestic barriers to competition. For example, reducing tariffs on vehicle imports allows small-scale private transporters to compete by importing trucks from abroad.

A potential problem with early convertibility is that firms likely to be viable in the long run might experience severe financial difficulties during the transition from controlled to world prices. The balance of payments also could deteriorate until the supply side of the economy responds to the new market incentives and exports rise. Both of these problems could be addressed by converting existing trade barriers into temporary tariffs—sometimes called the tariffication approach. This approach has several advantages: It replaces a potentially complex array of existing trade distortions with a single gap between domestic and world prices, makes the degree of protection more transparent, and sets the stage for eventual tariff reduction.

With the support of the World Bank, a number of Latin American countries have made important progress in opening trade as part of their reform efforts. Bolivia and Mexico, in particular, replaced quotas and nontariff barriers with reduced, uniform tariffs. In a number of countries, more competitive exchange rates and the elimination of export barriers contributed to a significant increase in nontraditional exports. Argentina and Peru have eased exchange restrictions that had led to black markets for foreign exchange in recent years.

Many economists support focusing initially on convertibility for trade and other current account transactions while temporarily delaying convertibility for international capital flows. They argue that remaining market distortions or a lack of confidence in the economic future of the country could lead to capital flight. But capital account convertibility must not be delayed too long. External convertibility on capital transactions may be important in providing venture and working capital to private firms during the transition. It also facilitates the import of foreign know-how.

One historically important example in which the import of foreign technology was the centerpiece of a reform effort followed the Meiji restoration in Japan in 1868. Spurred by a desire to emulate the economic success of the West, Japan within a remarkably short period of time overhauled its central government, changed what was being taught in its schools, and shifted the energies of its people toward commerce. The linchpins of the Japanese transition were the concentration on importing foreign technology and technical assistance, the development of a transportation infrastructure conducive to commerce and trade, and the privatization of government production facilities. Entire factories were imported, along with technical advisers who operated the machinery until Japanese workers and managers were capable of doing it on their own.

Full convertibility for international capital flows may be delayed without obstructing the reform process when other measures to attract foreign investment are in place. Hungary adopted a foreign investment law that guarantees repatriation of profits. As a result, it seems to have taken the lead in Eastern Europe in attracting foreign capital. As discussed further below, the creation of Enterprise Funds for Hungary, Poland, and Czechoslovakia reflects the Administration's emphasis on ensuring that adequate financing is provided to newly emerging private sectors.

When a reforming government decides to make its currency convertible for some set of international transactions, it must also choose between fixing the exchange rate or allowing it to move freely to its new equilibrium level. Authorities may choose to fix the exchange rate as part of a comprehensive stabilization package. If backed up by a credible noninflationary monetary policy, a fixed exchange rate may help reduce inflation expectations and thereby ease the transition to price stability. Choosing an appropriate level for the fixed rate is not easy, however. The higher the fixed value of domestic currency relative to foreign currency, the cheaper are foreign goods relative to domestic goods. Thus, while a high exchange rate reduces initial pressure on inflation by holding down the prices of imported goods, a low exchange rate enhances the competitiveness of domestic firms in world markets and reduces the likelihood of large trade deficits. Letting the exchange rate move freely to a new equilibrium allows the market to balance these opposing forces.

STRUCTURAL REFORMS

In addition to the principles discussed above, comprehensive reform requires structural measures. Private property and privatization should be institutionalized, domestic competition must be promoted, and the role of government must be reformed and limited. Most reforming countries of Eastern Europe have been slow to adopt these principles, which are central to the development of markets. Latin America already has private property rights and private firms, but many nations in the region could benefit greatly by promoting domestic competition, accelerating privatization, and continuing to redefine the role of the public sector.

Property Rights and Private Property

A successful transition to a market economy requires that private property rights be firmly established and that a legal system be developed to define and protect these rights. In addition, productive assets must be put into private hands through the process of privatization. Otherwise, producers have no incentive to respond to prices and to take risks, and the reform effort will fail to generate increased supplies of products consumers want to buy.

Private property and property rights are most notably absent in the command economies of Eastern Europe and the Soviet Union, where economic activity was based on the idea that almost all property belonged to the state. Although small-scale entrepreneurial activity was tolerated in some Eastern European countries in recent years, most control over the allocation of resources remained in the hands of the government. The public debate about private property in the Soviet Union has also been a political debate about commitment to change following 70 years of indoctrination about the evils of profit and capitalist enterprise. During Lenin's New Economic Policy of the 1920s, reforms encouraged private producers, especially farmers, to expand production. Many farmers successfully raised output and prospered, only to have that very success considered criminal during the Stalinist purges and collectivization drives of the late 1920s and 1930s. As a result, the most successful farmers and entrepreneurs were punished by expropriation of their property, exile to labor camps, and, in many cases, execution.

In Latin America, the institution of property rights has long been established but has not always been well respected. Government nationalization of industries, sometimes through expropriation, is one aspect of a legacy of not respecting property rights. More recently, inefficient and slow legal systems have discouraged private entrepreneurship.

Privatization of state enterprises is an urgent, albeit complex, task. The task is more difficult by several orders of magnitude than the privatizations that have occurred in developed market economies over the last 10 years. In Eastern Europe, for example, the government owns most of the land, buildings, and machinery. There are enormous benefits to transferring ownership to the private sector even though local citizens generally have little savings to invest, financial markets are not sufficiently developed to provide credit, and the widespread sale of domestic equity to foreigners raises political concerns. An added consideration is the widespread belief that those who profited under the old regime—and who, therefore, are among the few who can afford to make large equity investments—do not deserve to benefit from those activities.

Privatization requires expertise in accounting, financial markets, and the law. In most cases, the books of large government enterprises bear no relation to economic reality. That may make it easier for insiders to purchase these firms at very favorable prices and realize large gains. Concerns about such "sweetheart deals" have slowed privatization in both Eastern Europe and Latin America. Perhaps not surprisingly, in Eastern Europe the "spontaneous" or decentralized privatization of small enterprises and the development of new private firms has far outpaced government efforts to privatize large-scale enterprises.

In nearly all Latin American countries the process of privatization has recently accelerated. A number of countries have privatized enterprises as part of debt-for-equity programs. In 1990 Argentina and Mexico completed privatization of a number of large state firms and announced others, and other countries such as Chile and Costa Rica also stepped up their privatization efforts. Throughout the region, however, some of the largest enterprises remain in government hands and will be difficult to privatize or restructure, partly because of resistance from labor unions.

One question is the order in which to privatize enterprises. The Polish reform plan up to this point has been based on the "conventional" view that companies with positive net worth should be privatized first. Enterprises that are money losers, have high debt burdens, or are expected to need significant internal restructuring before they become viable are to be privatized later after the restructuring takes hold. By contrast, the reform plan in Yugoslavia is focused on privatizing loss-making industries first, presumably because this approach would reduce the subsidies the government must pay.

There are several possible methods of privatizing enterprises that can be used in conjunction with each other. Enterprises can be sold to workers or to the highest bidder, or deals can be individually negotiated and then presented to the government for approval. Another method is to distribute vouchers to the general public that allow citizens to purchase portions of firms at favorable rates, either directly or through investing in holding companies that accept management responsibility. The favorable equity implications of widespread domestic ownership has inspired Czechoslovakia to consider this latter approach. Poland is favoring a "menu" approach: In some cases, a combination of methods could be used in a single privatization, while in other cases the enterprise may choose among the legally allowed options.

A crucial element of the reform agenda must be the creation of a private housing market. In much of Eastern Europe the decay of the housing stock and a desperate lack of available housing creates real impediments to the free movement of workers. In many instances, workers cannot move to areas where there are jobs, because there is no housing for them and their families. Creation of a private housing market could be an important first step toward both improving labor mobility and raising living standards. Housing should be privatized, and builders and investors allowed to purchase land for construction. Property also must be transferable so that existing and new housing can be efficiently allocated.

Promoting Domestic Competition

Another principle for a successful transition involves a range of measures to create not only private, but also competitive industries. Desocializing without also demonopolizing confers little benefit. Actions to promote competitive domestic market structures include restructuring existing firms, facilitating the entry or establishment of new firms, and putting in place an antitrust policy to promote competitive domestic markets. In addition, as noted above, competition can also come from abroad.

Competition is generally enhanced if existing state-owned enterprises are split into smaller, viable firms before privatization. Unrelated or unprofitable activities can be jettisoned, and monopolies can be split into separate, competing firms. The restructuring of viable firms may also involve adoption of new technologies and the reallocation of labor and capital to new uses. Accounting and financial techniques must be brought to bear to ensure that firms are operating on a sound financial basis.

Private sector activity can also be encouraged by the sale of assets of state enterprises to the private sector. Consider the challenge of creating transportation industries, such as trucking. In most command economies, firms produce many of their own inputs including transportation services. Thus, most trucks are owned by large state enterprises that have little incentive to compete with each other. If a state enterprise is divided into several viable firms and its trucks are sold outright, their purchase by entrepreneurs could aid the development of a private distribution system.

Barriers to the creation of new firms must be removed. In Eastern Europe there has been rapid growth of new firms over the past year but the public sector continues to dominate. These new firms are usually small and often are at a disadvantage in competing with the state enterprises for inputs and credit, but they have proved very successful where the efficient scale of firms is small or where entrepreneurship is important.

Policies to protect competition also are required. While it is natural and desirable to want to sweep away many regulations as vestiges of the government-dominated systems that reforming countries have rejected, laws are needed to ensure that creation of a private sector does not merely replace a public monopoly with a private one. A basic antitrust law aimed at preventing cartel behavior by firms producing the same product and mergers that create monopoly is essential.

During the transition, basic banking and credit market functions must be developed quickly. In command economies, banks mainly serve a bookkeeping role, allocating credit as directed by the central government plan. Retail banking as understood in market economies barely exists. The use of checking accounts is limited, and check clearing can take weeks. An important early role for the central banks of Eastern Europe can be to help create and then monitor a payments system. The economies of Eastern Europe also will need a competitive banking system that provides access to credit for new and restructured firms.

Well-developed financial markets serve other roles as well. They allow risks to be shifted to those who are most willing to bear them. They allow firms to diversify and hedge and to mobilize private savings. Yet, many of the existing banks have distorted balance sheets from years of financing state enterprises without concern for creditworthiness. Reform requires a tremendous amount of expertise; systems and methods of credit evaluation and ways to manage risk must be introduced. Technical assistance from abroad will be useful in creating efficient banks.

Reforming and Limiting the Role of Government

A successful transition to a market economy in Eastern Europe requires a complete overhaul in the role of the government, to reorient it toward the tasks appropriate to a market economy. In Latin America, reduced government involvement in the economy would free resources for private use, allowing the private sector to grow and prosper, reward investors, and raise funds for investment. Some tasks, such as putting a sensible tax system in place, as discussed earlier, are formidable. Important new functions for reforming governments range from collection of meaningful economic data to environmental regulation.

The government must also develop a social safety net. As economic restructuring takes place, many workers will lose their jobs because inefficient enterprises are likely to be shut down or to fail to become viable under private management. Although these dislocations are a prerequisite for building a more productive economy, the hardships that fall on workers and their families can and should be cushioned. Unemployment compensation and worker retraining are effective approaches to dealing with these problems, and they can also help to minimize worker resistance to reforms. Many features of a well-designed, targeted social safety net, such as unemployment insurance, are also important to encourage workers to incur risks and change jobs in response to labor market signals. Labor mobility is critical if contraction of the state sector is to free workers for private sector activities.

Governments should facilitate the establishment of a sound education system that can produce a work force able to build and operate a modern market economy. One advantage held by some of the Eastern European countries, such as Hungary and Poland, is the relatively high level of education of their workers. With educated, well-trained labor forces, one of the essential requirements for a growth economy is in place. Sound training in business and economics is also required. It is important that the policymakers and populace understand the economic rationale for market-based reform, for without popular support, reform programs will not succeed.

SUMMARY

- Certain fundamental principles—formulating sound monetary and fiscal policies, removing domestic price controls, opening the economy to international market forces, ensuring property rights and private property, creating competition, and reforming and limiting the role of government—are essential for a successful transition to a healthy market economy.

- Numerous countries have attempted the difficult task of implementing one or more of these principles. But no modern economy has implemented all principles at one time.
- Latin America starts with more of the elements of a market economy in place than does Eastern Europe. In both regions, however, healthy market economies require both macroeconomic and structural reforms.
- Macroeconomic reforms provide a stable economic backdrop for the planning decisions of investors and entrepreneurs. Such reforms allow prices, wages, and interest rates to respond to domestic and world market forces, which helps to assure that the economy's resources are allocated productively and in accordance with peoples' wants.
- It is essential that economic reform elicit competitive, private-sector activity. Structural reforms contribute by firmly establishing private property rights, putting productive assets into private hands, and promoting competitive behavior through, for example, antitrust laws.

IMPLEMENTING ECONOMIC REFORMS

The preceding discussion of economic principles to guide the transition to a market-oriented economy highlights the complexity and difficulty of the reform effort. What methods should be chosen? Which principles should be emphasized first? How rapidly should the reforms be implemented? These choices are difficult enough from a technical viewpoint. They are made even more difficult by the need of new democratic governments to build popular support for reform.

The temptation to underestimate the difficulty of the task ahead must be resisted. The legacy of state control will take time to overcome. Even successful reform will require a difficult transition period, as workers and other resources are reallocated to productive uses based on market-determined prices. In Eastern Europe, in particular, after 40 or more years of job security, unemployment, even if modest by Western standards, may be quite frightening. If unrealistic expectations are generated by the promised benefits of market reform, support for the necessary changes could collapse.

It is important to realize, however, that *the welfare of citizens in the Eastern European economies can be dramatically improved, even if output declines for a period of time.* Under the old regime, these economies often reported rapid output growth, but output was frequently mismeasured through the use of nonmarket prices that overstated the value of shoddy goods. More important, higher production did not necessarily improve living standards because the goods produced were not the ones that consumers wanted. If these countries have early success at producing the goods and services that individuals really want, actual well-being would no doubt rise far more than official statistics would show.

THE NEED FOR COMPREHENSIVE REFORM

The linkages and complementarity among many of the reform principles suggest that ideally they should be implemented simultaneously. Administratively, however, it is infeasible to do everything at once. Some changes are also clearly preconditions for others. For example, a legal infrastructure supporting both private ownership and the transfer of property rights is absolutely necessary to the process of privatization and the stimulation of private investment.

The most important characteristic of a successful reform program is that it be comprehensive and rapidly implemented. A command economy cannot be meshed with a market economy. Consequently, implementing half of a reform program achieves much less than half of the benefit of comprehensive reform. Half measures lead instead to confusion and falling output because productive individual incentives have not yet replaced the command system. Since a slow pace of reform will only prolong the pain of the transition and aggravate the inevitable disruptions, the reforms should be implemented as rapidly as possible.

There is general agreement that reforming countries must address first any existing problems of high inflation and severe balance of payments deficits. Without initial measures to reduce the uncertainty of the investment and production climate, attempts at privatization and price reform are unlikely to elicit the desired increases in private-sector investment and output. In short, the ability of the government to articulate and carry out a credible macroeconomic program provides an essential backdrop for private sector activity. Enterprise restructuring and privatization must, however, follow soon after.

Reforms such as privatization, price reform, and trade liberalization clearly go hand in hand. Privatization of monopolistic state enterprises, for example, could simply result in private monopolies that produce less and at higher prices than firms in a competitive setting, unless such entities are first dismantled or exposed to foreign competition. Trade liberalization and domestic price reform are closely related because world prices are usually the best guide to most internal price relationships. Domestic price reforms go hand in hand with privatization because managers cannot be expected to make sound investment, production, or employment decisions without rational price guides. In fact, it may not be possible to judge accurately the viability of many state enterprises until they have operated under market conditions with accurate price signals. Financial market reforms must also be under way and private sector financial institutions in place with a functioning payments system before investment decisions can be effectively transferred from government to private control.

EXAMPLE: REFORMING POLISH AGRICULTURE

The challenge of restructuring the Polish agricultural-food system illustrates the need for comprehensive reform. This sector begins with a solid base on which to build: Despite earlier collectivization efforts, privately owned farms accounted for 70–80 percent of land in agriculture and a similar percentage of output even before reforms began. Production is already diversified, and considerable export potential exists, but numerous structural impediments associated with the centrally planned economy must be removed to improve the sector's performance.

First, although most farms are considered "private," the lack of a well-functioning land-transfer system still hinders the consolidation of these small, uneconomic units (on average about 12.5 acres) into more efficient operations. Until recently, most land was transferred to the State Land Fund for reallocation, with political factors dictating who was allowed to purchase it.

Second, the lack of competition in the sectors providing agricultural production infrastructure, such as the farm input and processing sectors means that the incentives for efficient farm production decisions are missing. The input sector remains state-controlled: continuing inefficiencies and monopoly activity keep farm input prices excessively high, supplies for private farms inadequate, and input quality very poor. Until recently, farm inputs were provided only to farms that agreed to sell their output to state enterprises. That made it very difficult for a private marketing system to develop, even after private activity was authorized in the procurement sector and output prices were deregulated.

Food processing facilities are outmoded due to the lack of competition. Many facilities operate far below capacity and without concern for either the quality of the commodities processed or the foods produced. State slaughter facilities, for example, purchase pigs only according to weight—without taking into account fat content or other quality factors of potential concern to consumers. This system induces farmers to fatten pigs excessively and gives consumers meat containing large amounts of waste.

Third, inadequate capital markets and domination of foreign trade by state enterprises hinder the growth of private sector activity throughout the food distribution system. Modernizing existing plants requires capital and, therefore, capital markets and banks that lend long-term investment capital. Private enterprises must also have access to modern production inputs at reasonable prices. For example, setting up private meat shops was hindered by the lack of refrigerators, which only state retailers could import! Until access to international markets is achieved and transportation networks are demonopolized, private distribution, processing, and retail ventures can only expand slowly.

Fourth, freer trade of farm products is necessary to remove distortions in farm prices and to induce increases in farm output. Access to foreign markets for Poland's potential farm exports is as important as access to imported farm inputs, such as fertilizer. Lifting wheat export restrictions, for example, could help bring artificially depressed farm prices in line with higher world prices, encouraging increases in output and contributing much-needed foreign exchange.

This extended discussion of reform in Polish agriculture shows that private ownership of farms is only one step toward a well-functioning farm economy. For private farmers to take advantage of new opportunities, many other changes also need to be introduced. These include providing full property rights in land, competition in the distribution system, and access to international markets for both inputs and outputs.

SUMMARY

- Reforms must be comprehensive if they are to succeed. Rapid implementation is the best way to limit the inevitable disruption associated with reform.
- The success of reforms is best measured by their ability to encourage production of goods consumers want, not solely by changes in measured output.
- It is generally accepted that macroeconomic stabilization should be the initial priority for reforming countries with high inflation and severe external imbalances, but rapid structural reform must begin simultaneously or follow soon after.
- The difficulty of making a successful transformation is often underestimated. Realistic expectations about the benefits and costs of reform can sustain support for the adjustment effort.

EASTERN EUROPE AND THE SOVIET UNION

The degree to which the former command economies have implemented the basic reforms needed to effect a successful transition to a market economy varies significantly. This section summarizes the recent developments in several Eastern European countries where the reform process is well established and in the Soviet Union. Poland, Yugoslavia, and the former East Germany began their reform efforts in early 1990. Czechoslovakia and Hungary moved to accelerate their reform plans during the year. Bulgaria and Romania have not yet proceeded very far on the path toward economic reform and have faced considerable political uncertainty and disruption. In Bulgaria a political impasse delayed the adoption of a comprehensive reform program. Although reform was debated in Romania, and some privatization occurred, lack of public support during 1990 stalled progress toward implementing price reform and other essential elements of a comprehensive reform program. In the Soviet Union, hopes that comprehensive economic reform would be implemented quickly were dashed in late 1990 and early 1991 by an abrupt shift in government policy.

It is too soon to judge the full economic impact of reform programs. Even under ideal conditions, transition to healthy market economies will take time. Moreover, several external shocks affected the economies of Eastern Europe in 1990. It will take time for these countries to realize the benefits of the reforms taken to date.

POLAND, YUGOSLAVIA, AND EAST GERMANY

Although Poland, Yugoslavia, and East Germany took different paths, these countries had in common in 1990 programs focusing on macroeconomic reforms as the first step. Poland's program was the most ambitious and comprehensive. Enacted in January 1990, Poland's program emphasized quick measures to stabilize the economy, including price reform, steps to close the budget deficit, restraint of monetary growth, and establishment of a convertible currency at a fixed rate. The fiscal balance moved from a deficit of about 8 percent of GNP in 1989 to a surplus in 1990. The inflation rate dropped sharply but then settled at a higher than desirable level of about 5 percent a month. Authorities were able to stabilize the foreign exchange value of Polish currency and to maintain current account convertibility, while rebuilding the stock of foreign exchange reserves as exports to the West surged and imports fell. Activity in the newly emerging private sector appears to have increased significantly in 1990. However, reflecting a decline of about 25 percent in the sales of the socialized industrial sector, real GNP is reported to have fallen 12 percent in 1990. Measured unemployment had moved from negligible levels before the reform to above 8 percent.

The Polish program involves putting in place a far-reaching set of provisions to establish competitive industries and independent financial institutions. The privatization of existing enterprises moved slowly until late in the year, when the government completed its first large privatization and began the process of privatizing a number of other large companies, using a "menu" of different techniques. Finally, almost all price controls were removed, though wage flexibility was still limited by the central government through tax policy.

In 1990 the government of Yugoslavia embarked on a comprehensive program to stop soaring inflation. In its initial phase, the program devalued and fixed the nominal exchange rate of Yugoslavia's currency. Wages were temporarily frozen, while most prices were allowed to adjust freely, and import barriers were lowered. The 1990 program built on earlier structural and institutional reforms to recapitalize the banking system and restructure loss-making state enterprises.

The initial results of the stabilization program were quite positive. Monthly retail price inflation fell from 64 percent in December 1989 to near zero in the second quarter of 1990, and the decline in real output was less than that experienced by Poland. By midyear, however, fiscal problems began to appear, reflecting inadequate controls over public sector spending. Monetary policy was eased under pressure from illiquid enterprises and workers' demands for faster wage growth. Inflation jumped up to the range of 8 to 10 percent a month. In January 1991 there were worrisome developments in the stance of monetary policy that cast further doubt on inflation prospects. Even more discouraging were the escalation of ethnic rivalry and signs of political disintegration, which threaten the chances of implementing a coherent program.

In the former East Germany, unification caused far-reaching changes in the economy. Adopting the currency and many legal and economic institutions of the former West Germany through unification has reduced many uncertainties that have plagued transitions in other countries. Nonetheless, output in the third quarter of 1990 was 30 percent below its level a year earlier, although not all the decline was due to the reforms. Unemployment rose to about 7 percent of the work force, and roughly 20 percent of the population was underemployed. Real wages rose, perhaps reflecting the need to dissuade workers from emigrating to the former West Germany, and labor productivity declined. Competitive problems for firms with outmoded equipment and products and substandard product quality, hidden prior to unification, are now a concern. On the other hand, the flow of investment from the western portion of Germany is expected to grow, supporting a rebound in growth in the medium term.

HUNGARY AND CZECHOSLOVAKIA

Reform proceeded less rapidly in Hungary and Czechoslovakia. Entering 1990 the problems of inflation and declining output were not as severe in these countries as in Poland and Yugoslavia. Thus, macroeconomic reform may not have appeared critical. However, as 1990 proceeded, the pressures for reform grew.

Many of Hungary's subsidies were removed, although those for a few key goods, including some food and energy products, remained. The external trade performance of the economy was good, with a hard currency trade surplus of near $1 billion in 1990, despite poor agricultural performance due to drought and the impact of the Persian Gulf crisis. However, inflation remained high at over 30 percent a year, and the size of the fiscal deficit is troubling. Official unemployment stood at 1.7 percent at year-end. Industrial production was down about 10 percent in 1990, but production by small firms boomed. The privatization program began to take hold in 1990 with the process of privatization under way for 20 large state enterprises. A second group of 20 firms to be privatized was to be announced in early 1991. Sales of small enterprises to individuals were brisk, and the government planned to privatize 16,000 small firms in the next 2 years. As 1991 began, Hungary was taking steps to implement a 3-year reform program, including an expansion of external convertibility for international trade transactions.

After a year of focusing on political and legislative reform, the Czechoslovakian Government implemented a comprehensive economic reform effort in January 1991. The program decontrolled about 85 percent of all prices, established partial convertibility for the international trade of goods, and tightened fiscal policy. Small business privatization through auction began in January, but legislation to allow privatization of large state enterprises had not yet been passed. Over the 12 months to September 1990, output fell about 3.5 percent, and unemployment remained below 1 percent.

THE SOVIET UNION

In late 1990 and early 1991 economic reform efforts in the Soviet Union appeared to come to a halt. The government's decision to devalue large denomination ruble notes, announced in January 1991, caused disenchantment and created uncertainty about future economic prospects. The threatened increase of KGB involvement in economic affairs is likely to stifle private incentives and entrepreneurship. These developments have dimmed hopes for market reform and further damaged an economy that had already deteriorated sharply in 1990. Official statistics estimated the decline in output for 1990 at about 2 percent, but the actual decline in living standards appeared to be much worse. Most of the reduction in output was in manufacturing, construction, and transportation. The problems in transportation reflected the critical nature of Soviet distribution problems; the collapse of the distribution system could lead to widespread food shortages in 1991 despite record harvests. The balance of payments on international transactions was expected to be in deficit by $14 billion in 1990. Arrears on loans from abroad may have exceeded $5 billion, and the fiscal deficit, which reached 8 percent of GNP in 1990, could rise further in 1991.

The Soviet Union remains an important trading partner of Eastern Europe. Therefore, the prospects of the region depend importantly on the health of the Soviet economy. But the recent retreat of economic reform in the Soviet Union raises concerns that its economy will continue to deteriorate and slow progress throughout Eastern Europe. Reforms initiated in 1987 began to dismantle the command system but did not replace it with market mechanisms or incentives. Fundamental change must occur if the Soviet Union is to reverse the deterioration in living standards.

CHALLENGES IN 1990 AND 1991

Several economic shocks complicated the reform efforts of the region in late 1990 and continued into 1991. Together they represent a formidable challenge to the region's democratically elected leaders.

The End of the East Bloc Trading Regime

The shift toward convertible currency trade at market prices within Eastern Europe and the Soviet Union in January 1991 presents a difficult challenge for the region. From 1949 until the end of 1990, trade between the countries of Eastern Europe and the Soviet Union was conducted essentially through bilateral barter arrangements governed by the Council for Mutual Economic Assistance (CMEA). The unit of account was the "transferable ruble," which could not be exchanged for any other currency. Trade was thus conducted at nonmarket prices, and trade surpluses were merely reflected in accumulation of transferable ruble balances. Over time, the effect was to reinforce central planning and make the Eastern Europeans and the Soviet Union more dependent on each other.

Although the nonconvertible currency system of CMEA was wasteful and inefficient, it is widely agreed that on average it benefited the Eastern European countries with respect to the Soviet Union over the past decade. Essentially, Eastern Europe received oil and natural gas from the Soviet Union at below world market prices. The effect of CMEA's end will vary across countries. Hungary has already had some success reorienting its trade toward the West, for instance, while Bulgaria, with fully 50 percent of its trade with the Soviet Union, faces a more difficult challenge.

Moreover, the former East Germany has sharply reduced its demand for Eastern European products, and concerns about the economic and political stability of the Soviet Union make the trade outlook even more uncertain. Eastern European countries are negotiating bilateral agreements governing trade among themselves and with the Soviet Union in 1991.

Other Shocks

The increase in the price of oil following Iraq's invasion of Kuwait in August was a significant shock to the economies of Eastern Europe. The task of estimating the impact of oil price shocks and designing policy options is difficult for developed market economies, let alone the economies of Eastern Europe. (Chapter 3 of this report discusses oil price shocks and economic policy.) Because these are economies in transition, the market mechanism—even in the countries where reform has gone furthest—does not work as quickly, smoothly, or efficiently as it does in industrial economies to adjust demand to the higher price of energy. Although the price of oil has fallen since October 1990 and especially since the start of Operation Desert Storm in January 1991, future oil prices remain uncertain.

In addition to the oil price effects, *Soviet shipments of oil to Eastern Europe fell approximately 20 percent in 1990 because of Soviet production declines.* Several Eastern European countries also were to receive oil from Iraq as debt payment. The international embargo on Iraq meant that this oil had to be replaced by purchases at world market prices. Some countries also lost substantial construction contracts and worker remittances from the Mideast.

Another adverse shock in 1990 was a drought that affected Southeastern Europe. Bulgaria, Hungary, and Romania were the most severely affected. The costs of the drought included the loss of crops and reduced livestock populations, as lack of feed grains forced many farms to send their animals to slaughter sooner than planned.

Implications for the Transition

Taken together, these shocks represent a formidable challenge to Eastern European governments. If sound policies are maintained and oil prices stabilize in a range not far from that prevailing prior to the 1990 Iraq invasion of Kuwait, these challenges should be manageable. However, these are pressing concerns, and they can create pressure to ease up on adjustment efforts. Delaying reform, however, would only aggravate the economic costs of these shocks and risk a return to the piecemeal reforms that were so unsuccessful in the mid-1980s. Countries that can build a consensus to accelerate reforms have much to gain.

SUMMARY

- Poland, Yugoslavia, and East Germany, starting from different circumstances, are all undergoing rapid transformations to a market economy. Although the output and unemployment costs of the transition have been greater than initially expect-

ed, the measures taken are the basis for a significant improvement in living standards in the medium term.

- **Hungary and Czechoslovakia in 1990 adopted more gradual programs, but by the end of the year both had plans to accelerate their reform efforts.**
- **The apparent abrupt halt to reform efforts in the Soviet Union aggravated an economic situation that had deteriorated badly during 1990.**
- Recent adverse economic developments complicate the efforts of Eastern European countries to make successful transitions to market economies. The challenge facing these countries is to maintain and intensify their reform effort, with the support of the Western industrial countries, despite the uncertainties they face in 1991.

REFORM IN THE AMERICAS

Major steps have been taken by governments throughout Latin America toward open, market-oriented economies and away from outmoded statist institutions. Prospects are now better than ever before for the integration of the economies of North and South America through broadly expanded trade and investment linkages.

RECENT HISTORY OF LATIN AMERICAN REFORMS

Most recent Latin American reform efforts are rooted in the adverse economic environment of the early 1980s and the failure of policies pursued for decades. By 1990, it was widely accepted that a new approach to solving the economic problems of the region was essential. Almost every country in Latin America now recognizes the need to move away from inward-looking policies, such as efforts to substitute domestic production for imports, toward trade-opening policies designed to strengthen competitiveness in world markets. The role of the public sector and of cumbersome state-owned enterprises is being widely reassessed, and deregulation and privatization have appeared on policy agendas throughout the region. As in Eastern Europe, correcting price distortions, reforming public expenditure and taxation policies, and improving the performance of financial markets are now important components of many of these countries' market-oriented strategies.

Much-needed and welcome political transformations are accompanying the trends in economic policy. Argentina in 1983, Uruguay in 1984, Brazil and Guatemala in 1985, Panama in 1989, and Chile and Nicaragua in 1990 are among the countries abandoning authoritarian regimes to join the ranks of Latin American democracies. Chile's new democratic government is effectively demonstrating that an open and democratic political system can reinforce the benefits of an expanding market economy.

The 1990s should be a decade of great opportunity for the region. With sustained world growth and expanded trade opportunities being sought through the Uruguay Round of multilateral trade negotiations and other Western Hemisphere pro-trade initiatives (discussed in Chapter 7), the restructured economies of Latin America have great potential to prosper. Perhaps most encouraging for the other countries of the region are the recent performances of Mexico and Chile, two countries at the forefront of the Latin American reform movement.

MEXICO

Mexico provides one of the best modern examples of a country engaged in economic restructuring. The difficult movement toward a more market-oriented, open economy has been under way for a number of years. *The reform process recently has been accelerated by the current President of Mexico, and the benefits of market-oriented reforms are now being realized.* The roots of the reform effort are different than in Eastern Europe, but Mexico did share some of the characteristics of the command economies. Public sector expenditures represented nearly 50 percent of GNP in 1982, for example, and the inefficiencies of the 1,150 state-owned enterprises, accounting for 25 percent of GNP in 1983, stifled economic performance. Mexico also maintained a restrictive import policy with extensive government control over trade and a highly overvalued exchange rate.

Mexico's debt crisis—precipitated in 1982 when oil prices fell, interest rates rose, and holdings of foreign exchange dwindled—necessitated the imposition of stringent macroeconomic stabilization measures. To restore external balance and stem the outflow of private capital, the exchange rate was adjusted to reflect market forces, and domestic spending was reduced. External equilibrium was attained initially at the expense of price stability, real wages, growth, and employment. But the success of the effort facilitated the restructuring of Mexico's external debt service, which allowed attention to turn to curbing inflation and reviving economic activity.

Mexico's economic restructuring has focused on reducing the public sector's role, increasing external competitiveness, improving public finances, and modernizing the financial system. More than 750 state-owned enterprises have been privatized, merged, or liquidated, and subsidies to the remaining entities have been reduced. These actions brought greater economic and financial efficiency to the state-owned sector and helped reduce public sector expenditures below 40 percent of gross domestic product in 1989. Fiscal and financial system reforms have also been important. Tax policy reforms closed corporate tax loopholes and improved the tax collection system, banking activities were progressively exposed to market forces, and the goal of returning banks to private ownership was recently announced.

A major initiative to reduce trade barriers has promoted the efficiency and modernization of domestic industries and successfully contained inflationary pressures. The opening-up process was enhanced when Mexico reversed a longstanding antitrade policy by joining the General Agreement on Tariffs and Trade (GATT) in 1986. Extensive import-licensing requirements were largely replaced with tariffs, which were then lowered significantly.

After many difficult years recent economic performance has been fairly good. GNP grew about 3 percent in 1989, and is thought to have grown faster in 1990. Inflation last year increased somewhat from its 1989 level, which had been the lowest rate in 10 years. The increase in economic activity is fueled by new dynamism of the private sector, which has been both reflected in and fueled by strong growth in private investment and private capital inflows from abroad. After declining by a third between 1981 and 1983, real private fixed investment grew at an average annual rate of 5.6 percent between 1983 and 1989.

Mexico must still meet the challenge of sustaining economic growth—a necessity if widespread poverty is ultimately to be alleviated. The Mexican Government's commitment to market-oriented reforms is strong, although big hurdles are still ahead. The process of privatization, for example, has only recently been extended to the largest, most complex state-owned enterprises, such as the telephone system. The strong interest of the United States in Mexico's success is illustrated in the President's commitment to negotiating a free-trade agreement with Mexico (discussed in Chapter 7). The Administration strongly backed Mexico's commercial bank debt-reduction agreement completed in March 1990. This agreement contributed to a significant reduction in debt and debt service, and increased confidence in the economic policies of the Mexican Government.

CHILE

Chile is unusual in Latin America in that its current reform efforts build on the dramatic economic restructuring in favor of private enterprise and markets that took place in the mid-1970s. After the overthrow of the socialist government in 1973, the country switched from extensive state intervention in most economic activities to a system based on private initiative. Price controls were removed, trade barriers were reduced, financial sector liberalization was undertaken, and many state enterprises and financial institutions were privatized. However, Chile's transition to a market economy and the presence of an authoritarian government represented a contradiction that could not endure. *With the return to power of a democratic government in March 1990, Chile's strong free enterprise system is matched by a freely elected democratic government for the first time in nearly 20 years.*

Like other countries of Latin America, Chile suffered an economic crisis in the early 1980s. The country was battered by many of the same external factors that hurt its neighbors and developing countries all over the world, including a deterioration in its terms of trade (as the price of oil rose and the price of copper, Chile's chief export, fell), a rise in international interest rates, and a recession in the international economy. A heavy international borrower both before and after these factors came into play, Chile's debt-servicing difficulties became unmanageable as interest rates rose and foreign exchange earnings fell. Faulty macroeconomic policies included inflationary levels of debt-financed domestic spending and an overvalued exchange rate that encouraged imports and discouraged exports. These policies heightened the debt crisis and deepened the economic recession. Poor supervision of the banking system also contributed to the bankruptcy of many enterprises and a financial crisis.

As elsewhere, emergency stabilization measures were the first stage of economic reform. To redress the severe external and internal imbalances, the overvaluation of the exchange rate was ended with a sharp devaluation, and automatic wage indexation was suspended. Emergency measures included large public employment programs, debt rescheduling, and guarantees that private debt would be repaid. For a few years the government focused on cushioning the effects of the recession, discouraging capital flight, and improving the trade balance.

In 1985 the government moved to supplement emergency measures with a more comprehensive reform program aimed at improving several fundamental structural problems: the lack of export diversity, the low level of savings and investment, and a precarious financial system. The plan involved reducing import tariffs and strengthening export incentives; improving public finances through the sale of state enterprises, tax policy reform, and conservative public spending policies; and creating a more favorable climate for private savings and investment through tax, pension, and housing policy reforms. Bank supervision was strengthened, and banking reform began in the mid-1980s. As a continuation of banking and financial policy reform, the central bank was given greater autonomy in 1989.

Between 1984 and 1989 the Chilean economy emerged from the recession and grew at an average rate of 6.3 percent a year. Unemployment declined, real wages increased, inflation dropped, and exports other than copper, such as fruit, forestry, and fishery products, performed very well. Private savings improved significantly, too, rising from about 2.2 percent of GNP in 1984 to 9.6 percent in 1989. Although stronger world copper prices since 1987 helped buoy economic performance, much credit goes to the successful implementation of the reform program.

The new democratically elected government remains strongly committed to an open market economy with a low level of state involvement. It is also directing new attention to social programs to alleviate poverty. In carrying out its constitutional mandate, the government faces the challenge of meeting its social priorities while maintaining the strict fiscal policies that have helped reduce external debt. This Administration's strong commitment to improving trade and investment relations between the United States and Chile can help sustain Chile's efforts and contribute to their success.

SUMMARY

- Governments throughout Latin America are rejecting earlier models of economic development, which stressed inward-looking policies and extensive state ownership, for a market-based approach that emphasizes openness and private enterprise.
- Some of this reorientation stems from the debt crisis of the early 1980s, which prompted stringent stabilization measures and revealed the underlying weaknesses of the structures of these economies.
- Many Latin American countries have embarked on sweeping reform programs. Mexico and Chile are strong examples, and efforts are also being made in Argentina, Peru, Venezuela, and elsewhere.

THE ROLE OF THE UNITED STATES

In both Eastern Europe and Latin America, the Administration has provided strong support for the transitions to democratic societies and free-market economies. First and foremost, this effort involves continued leadership through promoting our democratic ideals, building support among other industrial countries for the reforms, and making clear that markets offer the best hope for sustained growth in living standards.

This leadership is backed up by humanitarian, technical, and financial assistance and endorsement of measures to open markets and expand trade. The Administration has assisted Bulgaria, Hungary, Poland, the Soviet Union, and other countries in coping with severe shortages of necessities, such as food and medicine.

The U.S. Government's economic technical assistance is designed to support strong and comprehensive reform programs including social safety nets. The Administration also has encouraged democratic institution building in Eastern Europe. That assistance has supported an independent press and electronic media, the democratic political process, and the rule of law (for example, helping to draft legislation and support for an independent judiciary). It has also supported social and cultural pluralism through educational programs and cultural exchanges.

The public discussion of how to help reforming countries has been focused excessively on the need for financial assistance, which is only one part of the answer. Absent sound reform policies, this money would most likely be wasted. *Assistance should be designed to mesh with and encourage the reform effort so that it is used to accelerate rather than delay necessary reforms.* While assistance must be responsive to short-term needs, it is important to develop long-term assistance priorities that reinforce the fundamental reforms needed to establish long-term, sustainable growth.

U.S. SUPPORT FOR EASTERN EUROPE

In Eastern Europe the Administration is committed to encouraging the rapid transition of centralized command economies to free market systems. A vital component of this commitment is economic technical assistance.

The U.S. technical assistance effort offers a range of options that countries in transition can choose from, depending on their needs. This range includes providing management training and market economics education, giving technical assistance on energy issues, and helping to set up banking systems. The U.S. Government, for example, has helped to establish a regional environmental center in Budapest and has provided assistance to reduce pollution in Krakow, one of Eastern Europe's most polluted cities. Much of the assistance is directed to the private sector rather than the government. Legislation in 1989 provided assistance to Hungary and Poland. In 1990, Congress approved legislation expanding the U.S. assistance effort to $439 million in fiscal 1991 and extending funds to other economies in transition in Eastern Europe.

Polish Stabilization Fund

A key element of U.S. Government support for Poland was a U.S. contribution to a $1 billion stabilization fund in January 1990. The U.S. Government provided a $200 million grant to the fund, with other governments contributing primarily in the form of loans or lines of credit.

The fund was designed to provide credibility to the Polish reform plan by supporting the Polish Government in its effort to stabilize the exchange rate. Reducing inflation was a cornerstone of the

Polish program, which included measures to open the economy to foreign competition, fix the exchange rate to the U.S. dollar, and make the Polish currency convertible. Given the uncertainties associated with this initial attempt to transform a centrally planned economy into a market system and the importance of adhering to a fixed exchange rate to break inflationary expectations, the fund appears to have bolstered confidence that the reform measures could and would be sustained. The fund was renewed for 1991.

Some people have questioned whether the stabilization fund represents an efficient use of official assistance, noting that Poland has not drawn upon the resources of the fund. The fact that the fund did not need to be used, however, suggests that it provided confidence and support for the Polish program.

Assistance to New Private Enterprises

Another element of the U.S. Government assistance effort is creation of Enterprise Funds. Funds were established in 1990 for Hungary and Poland, and in November 1990 the President announced that a fund would also be created for Czechoslovakia. These funds promote development of the private sector by providing grants and loans to entrepreneurs, making equity investments, and supporting technical assistance. They are thus an important source of venture capital to new firms.

Trade Measures for Eastern Europe

To promote market reforms and ensure that these countries face open markets, the Administration has concluded business and investment agreements with Poland and Czechoslovakia and granted most-favored-nation (MFN) status to Czechoslovakia in 1990. In January 1991, the President requested MFN status for Bulgaria. (MFN status had already been given to Hungary, Poland, and Yugoslavia.) MFN status ensures that the United States will provide tariff treatment as liberal as that provided to other trade partners, except those with which it has a free-trade agreement. The Administration is also negotiating bilateral investment treaties and is working to relax existing trade restrictions with a number of countries in the region. Expanded trade opportunities are critical to creating a supportive external environment for reforms. Therefore, the United States and other countries should examine ways to expand trade opportunities for Eastern Europe.

U.S. SUPPORT FOR LATIN AMERICA

The U.S. Government has long been active in providing technical assistance and supporting market-oriented reforms in Latin America. In June 1990 the President unveiled his Enterprise for the Americas Initiative (EAI) to expand free trade throughout the hemisphere and lay the foundation for long-term growth in Latin

America and the Caribbean. The initiative consists of three parts: trade, investment, and debt. Chapter 7 discusses the trade elements of the initiative. On the investment side, the President proposed that the Inter-American Development Bank provide loans in support of reform of the investment regime. The President has requested that the Congress authorize a 5-year grant of $500 million to provide further support for investment reform, particularly privatization. These efforts are aimed at developing the private sector and improving the environment for private foreign investment. In that sense, the initiative parallels the goals of the Enterprise Funds for Eastern Europe.

Latin America would also benefit through the EAI from reduction of the substantial debt owed to the U.S. Government. For some loans, the stock of debt would be significantly reduced, and interest payments on the amounts that remained could be paid in local currency and used by the country in support of environmental projects. Other loans could be sold to investors making equity investments in the economy. The reduction in debt and debt-service payments would be contingent on these countries pursuing economic reforms including an open investment regime. The debt reduction supported by the EAI complements continuing U.S. initiatives to reduce the burden of the region's commercial bank debt.

The EAI has been extremely well received throughout the region, where leaders have acclaimed the initiative as the most important opportunity in hemispheric relations in years. Persistent efforts both in the United States and in each Latin American and Caribbean country to follow through on the vision of the initiative will be required to bring about real results. The EAI is a significant addition to the Administration's ongoing technical and financial assistance programs in the region. Other Administration initiatives, such as the Andean Trade Preference Initiative and the proposal for a U.S.-Mexico free-trade agreement, supplement the EAI and are described in Chapter 7.

WORKING WITH MULTILATERAL INSTITUTIONS AND OTHER GOVERNMENTS

In his speech to the annual meetings of the World Bank and IMF in September 1990, the President stressed the central role the multilateral institutions can play in helping economic reform in the 1990s. Both institutions have long been involved in support of economic reform in Latin America and Africa, and both are expanding their efforts in Eastern Europe. In 1990 the IMF supported the reform programs of Hungary, Poland, and Yugoslavia. Bulgaria and Czechoslovakia joined the World Bank and the IMF in September 1990. (Czechoslovakia had been an original member of these institutions before withdrawing in 1954.) In January 1991 Czechoslovakia embarked on an IMF program, and new programs for Hungary and Poland are expected to follow soon (Box 6–3).

In addition, at the initiative of the United States, the IMF has modified its policies so that it can help Eastern European and other member countries cope with higher import costs and other adverse trade effects stemming from the Persian Gulf crisis. The Administration also participated in the quick establishment of the European Bank for Reconstruction and Development and encouraged the World Bank to expand its policy-oriented lending program in support of critical structural reforms. Through policy advice and lending, the international financial institutions will take a leading role and advance the interest of the United States and other countries as well.

At the Houston Economic Summit in July 1990, the President, on behalf of the heads of state of the seven leading industrial nations, requested that the IMF lead a number of international institutions in a study of the Soviet economy. That study, presented to the President in December 1990, provides a comprehensive analysis of the Soviet economy. The report recommends that dramatic market-oriented reform proceed quickly and concludes that, when reform begins, technical assistance, not large-scale financial aid, is essential to successful reform.

The effectiveness of the U.S. Government assistance effort is enhanced by effective cooperation and coordination with other governments. The stabilization fund for Poland is just one example. Another is the effort, now under way, to work with Poland's other official creditors to reduce Poland's stock of official debt. U.S. efforts to create a stable, growth-oriented global economy after World War II paved the way for others to join the ranks of global economic powers. These countries now can share the responsibilities of supporting this effort for the economies in transition. The President was instrumental in establishing a group of 24 Western governments (called the G–24) to coordinate assistance for Eastern Europe on a case-by-case basis in support of IMF-led adjustment efforts. The G–24 has already coordinated about $20 billion in grants, credits, guarantees, and technical assistance for Eastern Europe.

THE ROLE OF THE U.S. PRIVATE SECTOR

The private sector can contribute to reform in emerging market economies through several different avenues. The President announced on May 12, 1990, the creation of the Citizens Democracy Corps to channel voluntary assistance to Central and Eastern Europe. The President has appointed the steering commission, and it is beginning its work. Other organizations involve retired executives and financial sector experts. For example, the International Executive Service Corp organized a number of technical assistance

Box 6-3.— The Role of the IMF in Economic Reform

The International Monetary Fund, an organization of 154 member countries, provides technical assistance, policy advice, and financial support to countries undertaking extensive structural and macroeconomic reforms. IMF financial support is planned in conjunction with the government officials of the country itself and requires strict adherence to an agreed schedule of policy adjustments and quantitative performance targets. Disbursement of support funds is conditional on meeting these targets.

Types of Support. Standby arrangements are loans that focus on fiscal, monetary, and exchange-rate policies aimed at overcoming short-term balance of payments difficulties. Repayment is to be made in 3¼ to 5 years. Extended arrangements are loans that support medium-term (3 to 4 years) programs of macroeconomic and structural reforms. Repayment is to be made in 4½ to 10 years. Structural adjustment facility and enhanced structural adjustment facility arrangements provide resources to support medium-term (3 years) structural reform programs in low-income countries.

The Compensatory and Contingency Financing Facility. This facility provides IMF loans for the following purposes. The compensatory element provides resources to members to cover temporary export shortfalls or excessive import costs of certain foodstuffs due to price fluctuations beyond their control. The contingency element provides protection to members with IMF programs against potential future adverse external shocks beyond their control that could otherwise jeopardize their economic performance under their IMF programs. In 1990, at the initiative of the United States, the facility was modified to allow financing for higher oil import costs and certain other losses due to the Gulf crisis.

What is conditionality? To ensure that nations with IMF financial support make consistent and substantial progress in attaining program goals, the IMF and the member country agree in advance to quarterly or semiannual target levels for a number of policy variables, such as domestic credit creation, international reserves, and government budget deficits. A country's drawings on IMF resources are conditional on attaining these intermediate targets. If these targets are not met, the IMF usually requires corrective policy actions before additional drawings may be made.

missions in 1990. Volunteers, including nonprofit organizations and universities, have already made a substantial contribution.

Ultimately, governments cannot and should not be the main source of financing to the private sector in these countries. Private firms here and in other countries also play a critical role in supporting the transition. Eastern European countries are blessed with able, well-trained work forces but lack entrepreneurs and capital. Meanwhile, direct investment and other forms of long-term capital inflows will be the key to a successful transformation in Latin America. Over time, the number of attractive business and investment opportunities will grow as these countries move toward free markets.

SUMMARY

- Financial assistance alone will not resolve the difficult challenges facing the countries of Eastern Europe, the Soviet Union, and the developing countries of Latin America.
- The U.S. effort has focused on technical assistance aimed at making the transition a sustained success over the long term.

CONCLUSION

The worldwide movement toward market reliance and political freedom continues to gather momentum. Nations in Eastern Europe are dismantling their command systems and endeavoring to replace them with thriving private sectors. This task will be long and difficult, and both governments and their citizens must understand that decades of neglect and state control cannot be overcome without a painful transition period. Given sufficient time to work, comprehensive reform will improve living standards dramatically as producers begin to make efficiently the goods that consumers want to buy.

The Latin American countries do not operate under as high a degree of state control as did the communist countries of Eastern Europe, but they also need to undo the extensive damage caused by failed economic policies. In both regions, the normal operation of markets was obstructed through widespread government interference and reliance on inefficient public enterprises.

Successful economic reform requires the rapid and comprehensive implementation of several critical policy principles. Establishing sound monetary and fiscal policies, decontrolling domestic prices, and opening the economy to international market forces will set the foundation for economic stability. These principles must be accompanied by a set of structural reform efforts that promote efficiency and provide production incentives. The structural reforms require establishing private property rights and privatization of public enterprises, promoting domestic competition, and reducing and reforming the role of government.

The convincing lesson from earlier piecemeal reform efforts in both Eastern Europe and Latin America is that only comprehensive reform programs can hope to create dynamic, growing economies. Implementing only part of the needed reforms is likely to yield little benefit. Without comprehensive reforms, output may decline substantially because individual incentives to produce are absent, and living standards cannot be increased. The reforms should also be implemented as quickly as politically and socially possible, since delays only prolong the pain and disruption of the transition period.

Reform efforts under way throughout the world present an enormous opportunity to improve living standards of hundreds of millions of people. Financial and technical assistance from the United States and other developed economies, combined with perseverance and patience in the countries in transition, can ensure that these nations make the most of their great new opportunities.

CHAPTER 7

Trade Liberalization and Economic Growth

THE GLOBAL TRADING SYSTEM has been a driving force of economic growth and prosperity, with world trade increasing more than one and a half times as fast as world income since the early 1960s. The fraction of U.S. production sold abroad has more than doubled since then, and exports now account for about one-eighth of gross national product (GNP). As the world's largest economy, the United States has greatly benefited from the rapid growth of trade. By promoting innovation, flexibility, and competition, the expansion of trade and the globalization of markets and firms have stimulated economic growth and improved living standards.

Many natural economic forces—such as the declines in transportation and communication costs—have contributed to the growth of trade, but trade liberalization through substantial reductions of tariff barriers has also been a significant factor. Seven rounds of multilateral trade negotiations, conducted under the auspices of the General Agreement on Tariffs and Trade (GATT), have helped reduce average tariffs in industrial countries on manufactured goods from over 40 percent in 1947 to about 5 percent today. GATT has also promoted trade by establishing internationally accepted rules of fair play that have prevented and resolved numerous commercial conflicts between nations.

A number of recent bilateral and regional economic policy initiatives have also helped to lower barriers to trade. In the Western Hemisphere, for instance, implementation of the U.S.-Canada Free-Trade Agreement has reduced many trade and investment barriers. Further market opening would come from a U.S.-Mexico free-trade agreement as well as from the hemisphere-wide system of free trade envisioned in the Enterprise for the Americas Initiative.

The current round of GATT negotiations, known as the Uruguay Round, is aimed at further lowering trade barriers and at preventing increased protectionism and government management of trade. An important goal of the United States and other countries in the Uruguay Round is to modernize and improve the rules embodied in the articles of the General Agreement on Tariffs and Trade. This includes extending rules to areas either previously uncovered or for which coverage is neither systematic nor explicit, such as services, intellectual property rights, and foreign investment; deepening and broadening coverage of agriculture and textiles; applying rules more thoroughly to developing countries; strengthening the dispute settlement procedures; and updating unfair trade rules to reflect modern business practices. Another goal is to cut tariffs worldwide and eliminate them altogether in several large manufacturing sectors.

Unfortunately, the negotiations were suspended in December 1990 due to an impasse in the part of the talks dealing with agriculture. Successful completion of the Uruguay Round is important. In recent years, the world has experienced a rise in nontariff barriers, managed trade arrangements, and other protectionist measures that have hindered the expansion of trade and offset market-opening initiatives. *The opening of markets around the world that would come from the success of the current GATT negotiations could greatly increase U.S. and world GNP. By contrast, a breakdown of the multilateral trading system could increase protectionist pressures to erect trade and investment barriers.* Just as market opening stimulated economic growth, increased protection can reduce long-run growth and prosperity. In addition, an escalating cycle of import protection that led to a severe and sudden rise in trade barriers could contribute to a short-run economic downturn; the ensuing declines in income and employment might, in turn, increase pressures for protection. The last great cycle of antitrade policies contributed significantly to the Great Depression of the 1930s.

Today's trading environment is vastly more complicated than it was in previous eras. New, complex products and services now permeate the world marketplace; trade barriers are more intricate; and companies are increasingly globalized. Through foreign direct investment and other international linkages, such as joint ventures and production-sharing arrangements, multinational companies have dispersed their production, research, and marketing facilities throughout the world. The result has been greater integration of the world's markets and firms. Today, companies compete worldwide not only through exports, but also through the location of facilities. Globalized companies are also playing an increasing role in world trade; for example, two-thirds of U.S. exports are traded by multinational corporations, with about two-fifths of these exports traded "internally" between the parents of multinationals and their affiliates located abroad. International trade and foreign direct investment are now inextricably entwined.

THE GAINS FROM FREE TRADE AND LOSSES FROM PROTECTIONISM

Trade—whether between individuals within a town, between towns within a country, or between countries—is a natural economic process. The tendency for individuals to engage in trade stems from the fundamental fact that voluntary trade benefits all participants. Even within a town, the exchange of goods and services permits greater efficiency and prosperity for all residents because it allows individuals to specialize in what they do relatively well. Clearly, it would be an inefficient use of a town's resources if all its citizens grew all of their own food, made all of their own clothes, and built their own shelters. With a division of labor and trade among individuals, the town will produce more goods using its available resources.

Countries, like individuals, are not all equally proficient at producing all goods. Just as specialization and trade among individuals in a town make everyone better off, international trade increases the prosperity of all nations by allowing countries to concentrate on what they do well and to trade for goods that they are relatively less efficient at producing. Technology, for example, enables U.S. companies to develop and manufacture many advanced goods more cheaply than companies from developing countries—even though American wages are many times higher than developing country wages. For less technologically advanced goods, the United States may also enjoy higher labor productivity. This productivity advantage, however, may not be enough to overcome the wage difference. As a result, firms from developing countries may be able to produce such goods at a lower cost.

If market forces are allowed to act freely, countries will make the products they are relatively cost efficient at producing and will trade for other products. Since this international division of labor is cost effective, all goods will be cheaper; consequently, all nations will benefit. Trade barriers restrict the market forces that lead to this efficient international division of labor. *Removing trade barriers increases the well-being of all nations by allowing a more efficient international allocation of resources.*

EFFICIENCY, PRODUCTIVITY, AND GROWTH

In 1817 when David Ricardo first argued that trade benefits all nations, an efficient international allocation of resources was relatively simple. Countries made certain products and traded for others. Today, trade is much more complex. Firms increasingly engage in international joint ventures, technology-sharing arrangements, and long-term supply contracts, as well as direct investments in foreign companies and facilities. Through these international linkages, firms achieve greater productivity and risk-sharing in research and development, marketing, and manufacturing. Thus, by improving the efficiency and flexibility of the allocation of resources, the globalization of firms and increased competition among them boost the prosperity of all nations.

Open markets and multinational firms increase efficiency by allowing companies to take advantage of national differences in productivity and resource costs. But they also promote efficiency even more directly. The development, production, and marketing of some products and services require large up-front investments. Unrestricted international trade and investment permit firms to attain the most efficient scale of operation, thereby increasing productivity and lowering average costs. The realization of these economies of scale is generally good for business and benefits consumers by increasing their choice of products and raising the purchasing power of their incomes.

These beneficial effects, usually called the efficiency gains from trade, are permanent, although this fact is not universally understood. For instance, it has been claimed that the economic cost of a major rise in trade barriers worldwide would be no greater than that of a mild recession. This claim, however, misses the point that recessions typically last for less than a year, while protectionist trade barriers impose costs that would lower incomes around the world for decades. Thus, even if the costs of a mild recession and an increase in protection were comparable on an annual basis, a major rise in trade barriers would have a much greater total cost.

Globalization and the Flexibility of the Economy

In today's rapidly changing world marketplace, flexibility is important: An efficient allocation of resources this year may not be efficient next year. *The globalization of markets and companies increases the ability of the U.S. economy to respond to changes in technology and the state of the world economy.* Access to foreign markets, technologies, and capital allows resources to move more quickly from one sector to another when patterns of international competitiveness shift. It also permits U.S. companies to respond more rapidly and effectively to changes in technology, products, and markets. The globalization of production networks also implies that reducing trade barriers in a particular foreign market may well lead to outcomes other than increased exports from the United States. These alternative outcomes include increased exports by companies that are affiliated with U.S. multinationals but located abroad; increased exports by foreign multinationals located overseas; and the establishment by U.S. companies of new facilities in the foreign market through direct investment.

Pro-competitive Effects of Trade

Competition helps push companies to produce efficiently goods that consumers want and to charge competitive prices. If a domestic manufacturer tried to charge too much for its products, for example, consumers would buy from the competition. Trade barriers, which tend to restrict import competition, reduce these beneficial effects. *Import competition promotes cost efficiency, quality awareness, and competitive pricing by domestic firms.* As discussed below, added competition can also encourage the rate of innovation.

Investment Effects of Removing Trade Barriers

Freeing up international trade and investment promotes a more efficient use of resources. These efficiency gains, however, reflect only part of the benefits from an open trading system. To the extent that capital becomes more efficient and profitable, investing in new capital becomes more attractive. *Market-opening initiatives can improve the investment climate, thereby promoting investment and spurring growth.* An example can be seen quite clearly in the investment-led growth that Spain experienced after it joined the European Community (EC) in 1986. Membership in the EC committed Spain to removing all barriers to the movement of goods, people, and capital between Spain and the other EC nations. During the following 2 years, Spanish investment grew at an annual rate of 14 percent—almost three times the rate of growth of Spanish income. In contrast, investment in Spain grew more slowly than income during the first half of the 1980s. While the lowering of trade barriers was not the only factor stimulating Spanish investment, the induced capital formation magnified the efficiency gains from liberalization by providing additional productive resources.

Long-Term Growth Effects of Trade

Long-term growth has many sources. Growth of the labor force, for instance, provides more workers every year and thus the possibility of more output every year. Another source of long-term growth is improved technology and the rise in output per worker—that is, in labor productivity—that accompanies it. The effectiveness with which capital and labor are combined to create output is constrained by technical and managerial know-how. Advances in such know-how are primarily produced by profit-motivated firms. To develop new products or improve manufacturing efficiency for existing products, a firm must invest in knowledge creation. The return on such investments is the profit that flows from the temporary advantage that the innovation gives the firm over its competitors. From an economy-wide perspective, these profit-motivated innovations allow more output to be produced from the economy's resources. The resulting productivity growth boosts the growth of living standards.

International trade can promote long-term growth by encouraging technological innovation. By permitting innovators to sell to a larger market, trade may increase the profitability of innovation. That, in turn, spurs innovation and growth of productivity and incomes. For instance, access to foreign markets may allow firms to spread research and development costs over more sales, thereby increasing the profitability of innovation. However, this pro-innovation effect of a larger market may be partly offset by the fact that there may be more competing innovators and innovations in a larger market. Depending on the circumstances, trade may stimulate innovation and productivity growth by confronting firms with a stark choice between innovating and going out of business.

The globalization of firms and markets also spurs technological progress through the international exchange of technical knowledge. Domestic companies, for example, often use imported components in making final goods. Foreign innovations that improve the quality or lower the price of such components improve the quality and lower the price of the final goods. A closely related pro-growth effect is the way in which international trade and investment may help alleviate duplication of research effort, thereby permitting more efficient use of the world's research resources.

The notion that international trade increases economic growth is centuries old and widely accepted today. Quantitative estimates of the impact of market opening on growth are more difficult to obtain than its efficiency effects, however, because economists have begun only recently to develop analytic frameworks that can capture the links between trade, innovation, and growth. Typically, estimates of the gains from market opening incorporate only the efficiency effects. However, in assessing the quantitative impact of market-opening initiatives such as the Uruguay Round, it is important to include the innovation and growth effects as well, since they are potentially quite large (Box 7–1 and Chart 7–1).

IMPORT PROTECTION AND MANAGED TRADE

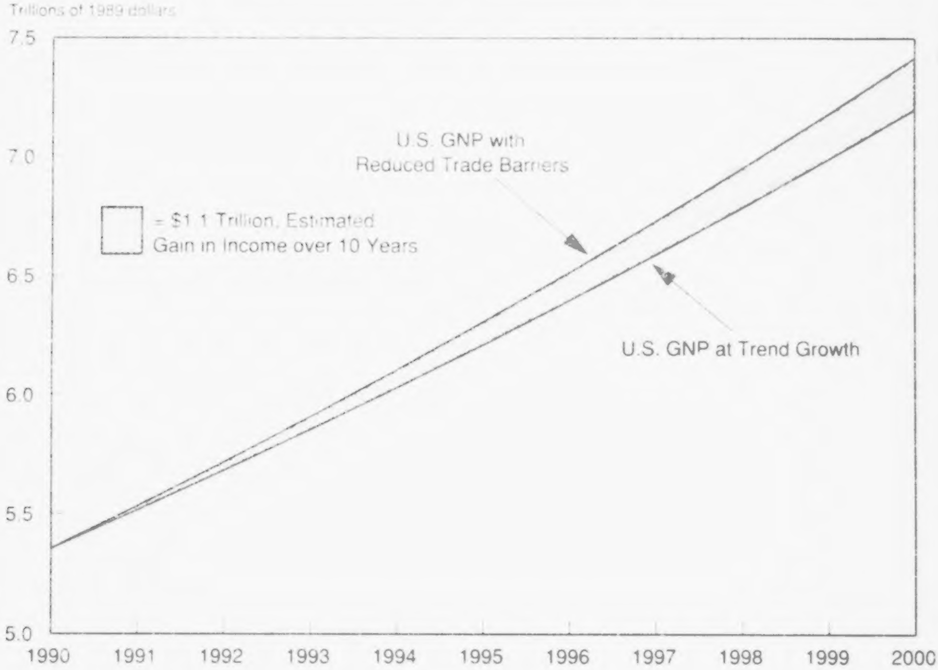
Just as opening markets is beneficial, policies that protect markets from international competition reduce efficiency and impede growth. Import protection policies take many forms: Tariffs reduce import competition by taxing imports, import quotas restrict the quantity of imports directly, and voluntary restraint agreements (VRAs) reduce imports by inducing foreign producers to decrease their exports. Policies that manage international market forces or alter market outcomes, such as government management of market shares, prices, or the composition of imports or exports, are examples of managed trade.

Box 7-1.—The Income Effects of a Successful Uruguay Round

Successful completion of the Uruguay Round would raise U.S. income significantly. The substantial reduction of tariff and nontariff trade barriers resulting from a successful conclusion of the round would boost U.S. income by enhancing the efficiency of the U.S. economy. Additionally, a more open world trading and investment system would promote growth by encouraging innovation and investment. Chart 7-1 shows projected growth paths with and without successful completion of the Uruguay Round. Taking growth and efficiency effects together, it is estimated that the level of U.S. GNP would be 3 percent higher in the year 2000 than it would be without the reduction of trade barriers that is likely to result from successful completion of the Uruguay Round. Of course, U.S. income would be higher even during the years preceding 2000. Adding up the annual gains over the next 10 years yields an impressive $1.1 trillion.

Chart 7-1 **Estimated increase in U.S. GNP from a Successful Uruguay Round**

Reduced trade barriers resulting from a successful Uruguay Round would boost U.S. income substantially.



Sources: Office of the U.S. Trade Representative and Council of Economic Advisers.

Protectionist policies in general, and managed trade in particular, dampen U.S. productivity and growth for many reasons. When governments interfere with market forces, the allocation of resources reflects political interests and power, which do not usually produce an allocation of resources that maximizes economic efficiency or average living standards. Moreover, such allocations typically involve a delicate political balancing, which makes it difficult to react flexibly to changes in the international economy or shifts in competitiveness. Also, governments rarely have the necessary information, background, or general understanding of commercial realities to make good business decisions. Finally, detailed government intervention may diminish competition, which is essential to the proper functioning of the free-market system. When governments determine market shares, sales, or prices, they lessen the pressure on firms to produce efficiently and price competitively. Indeed, managed trade often results in market cartels.

The Costs of Protection

The cost of import restrictions drives home the importance of open markets. Import restrictions of all kinds tend to reduce import competition, thereby raising the prices of both imports and those domestic products that compete with them. Higher prices benefit domestic producers of the goods but harm consumers who buy them. *In this sense, import restrictions are like a sales tax on imports that is used to finance a production subsidy to the protected domestic industry.*

In the clothing and textile sector, for example, trade is managed in great detail by a worldwide web of thousands of bilateral quotas involving more than 50 countries. The quotas and their associated growth rates are renegotiated under an international agreement known as the Multi-Fiber Arrangement. Every few years since 1974, the Multi-Fiber Arrangement itself has been renegotiated. Additional quotas are intermittently placed on new fabrics and new suppliers when their exports rise enough to disrupt domestic production. In the United States, imports of textiles and clothing are restricted by hundreds of these bilateral quotas, as well as by relatively high tariffs. U.S. producers benefit from the higher prices on each item they sell, while U.S. buyers lose because they must pay higher prices on each item they buy, whether imported or domestic. It has been estimated that protection in this sector cost American consumers about $11 billion in 1987, while U.S. producers gained slightly more than $4 billion.

This pattern of gains and losses is similar for import restrictions on other products. Between 1981 and 1985, for example, the number of imported Japanese automobiles was restricted by a voluntary restraint agreement. One study estimates that this VRA cost U.S. consumers $5.8 billion in 1984, while U.S. automakers gained only $2.6 billion. The imports of machine tools are currently restricted by VRAs. The consumer cost of VRAs on machine tools was $48 million in 1988, while the gain to U.S. machine tool manufacturers was only $11 million. Since consumers of machine tools are typically U.S. manufacturers themselves, the VRAs have an additional effect. By raising the cost of important inputs, the VRAs may reduce the competitiveness of other U.S. manufacturing firms.

Sugar provides another complex example of import protection. The U.S. Department of Agriculture (USDA) must by law enforce a price floor of 18 cents per pound of sugar. Moreover, the USDA must maintain that price with no cost to the government. The problem is that the world price of sugar is far below 18 cents, and it fluctuates. If sugar imports were not managed, almost all U.S. consumers would buy less costly imported sugar, driving the U.S. market price below 18 cents. Since the USDA stands ready to buy unlimited quantities from U.S. producers at 18 cents, it would be forced to purchase the entire U.S. sugar output every year. That, of course, would violate current law. The solution implemented by USDA is to manage a set of trade restrictions that reduces sugar imports enough to ensure that U.S. demand meets supply above 18 cents a pound. Moreover, since market conditions change in the United States and the rest of the world, government officials must adjust these import restrictions to keep the market price near 18 cents a pound. It has been estimated that import restrictions on sugar cost American consumers $1.9 billion in 1987, while producers benefited by only $1 billion.

The Myth that Protection Saves Jobs

Although it is commonly asserted that protection saves jobs, this assertion is misleading. *Protection does not save jobs in the long run for the economy as a whole, it merely keeps jobs in the protected sectors*. Removing protection can, however, lead to short-run unemployment as displaced workers look for new jobs. The studies of voluntary restraint agreements mentioned above also calculated the consumer cost of the relevant protectionist policies relative to the number of jobs "saved." What these calculations actually show is the consumer cost of keeping one person employed in the protected sector instead of some other sector. To take one example, the consumer cost per job "saved" by the machine tool VRAs was estimated to be $120,000 a year.

Political Economy of Protectionist Policies

The discussion of protection leads to the issue of why some sectors are protected, while others, indeed most, are allowed to adjust to import competition. More generally, it raises the question: *If consumers always lose more than producers gain, why do the United States and other countries have import restrictions?*

The answer is that the cost to consumers is spread over many millions of people, while the gain to producers is divided among many fewer people. As a result, producers often find it worthwhile to pay the cost of organizing and influencing their governments. Since the per consumer cost of import restrictions is typically low, consumers generally do not find it worthwhile to pay the cost of participating in such efforts.

Fairness in Trade

To many, the economic effects of trade barriers are only part of the story. To them it is simply unfair that some governments discriminate against foreign products through the use of tariffs or other barriers to trade. Overly bureaucratic procedures that impede imports, unilateral decisions that imports do not mesh with certain tastes or standards, and seemingly arbitrary health standards provide examples of governmental discrimination against foreign products that go against many peoples' notion of fair play.

The concept of fairness in trade is embodied in the principles of GATT. A basic GATT precept, for example, is the most-favored-nation (MFN) rule. Under MFN, countries that are members of GATT must treat all other members equally in their application of trade measures. Most countries, including the United States, prefer to reduce trade barriers in concert with other nations, in part because resistance to lowering protection is likely to be mitigated if it can be done on a more equal, or fairer, basis. The exchange-of-concessions approach to trade negotiations endorsed by GATT (discussed below) embodies this notion of fairness.

Another concept related to fairness is that of "national treatment," that is, the idea that the products of domestic and foreign firms should receive equal treatment with respect to domestic taxes and regulations. In the process of assessing and mediating many international disputes over alleged unfair trade barriers, GATT typically applies the national treatment rule by determining if the products of foreign firms are being treated differently from those of local firms.

SUMMARY

- Markets and companies are increasingly global in scope. The resulting increase in trade and investment benefits the United States and the world as a whole by allowing resources to be more productively and flexibly utilized.
- Opening markets to international trade pushes companies to produce efficiently goods that consumers want and to charge competitive prices. Open markets also improve efficiency by allowing companies to operate at the most efficient scale of operation.

- Reducing barriers to international trade and investment can improve the investment climate and increase the rate of innovation, thereby increasing the rate of growth of living standards.
- Managed trade and protectionist policies are harmful because they reduce the efficiency and flexibility of the economy and hinder economic growth.

GLOBAL TRADE AND THE URUGUAY ROUND

GATT has contributed significantly to the rapid growth of world trade. By facilitating the reduction of trade barriers through multilateral trade negotiations, GATT has stimulated trade growth directly. Trade has also been fostered more indirectly by the strengthening and continued acceptance of GATT's rules governing international commerce. Just as domestic business laws are essential to the smooth functioning of commercial relationships within a country, GATT is important in facilitating trade among countries.

Today, the GATT system is facing many challenges. The original agreement was written primarily to deal with trade in manufactured goods among developed countries, yet today only about three-fifths of world export earnings come from manufactures. Services account for about one-fifth of world export earnings, agriculture accounts for about one-tenth, and oil and minerals account for the rest. Moreover, in recent years many developing countries have become important participants in the trading system, yet they are not fully subject to GATT rules. Foreign direct investment by corporations is also an increasingly important aspect of the world trading system, yet GATT rules do not explicitly address such investment.

The nature of today's trade barriers poses new challenges to the GATT system. Since tariff barriers are quite low on average—at least in developed nations—continued market opening requires that nontariff barriers be reduced. While tariffs are easy to quantify and relatively easy to negotiate, many of the nontariff barriers to trade discussed in the Uruguay Round, such as government subsidies and import quotas, have proved more difficult to negotiate and reduce. Additionally, in the past decade the number of managed trade arrangements has increased. Agriculture, automobiles, consumer electronics, semiconductors, steel, textiles, and other sectors have been subjected to governmental management of exports, market shares, and prices in various parts of the world. Finally, in today's highly interdependent world, what appear to be domestic policies may have international trade implications. In fact, a number of recent trade disputes have their roots in national policies that are not related to international trade in an obvious way (Box 7-2).

Box 7-2.—"Nontrade" Policies Can Cause Trade Disputes

Some recent cases linking trade and nontrade concerns involve meat, cigarettes, wine, and trapped fur.

- **In 1989 the European Community banned all imports of meat treated with growth promotants following a Community-wide ban on nontherapeutic hormones used in livestock production. The United States believed the directive was not based on scientific evidence and that it constituted an unjustifiable restriction on trade.** Bilateral consultations were eventually able to resolve a number of points of contention, but not the underlying issue of how to deal with food standards that are not based on scientific evidence.
- The government of Thailand instituted a ban on cigarette advertising in addition to a ban on imported cigarettes and other restrictive practices. In response to a complaint from the United States, GATT found the import ban illegal but ruled that Thailand can prohibit tobacco advertising for health reasons.
- In accordance with a U.S. law prohibiting residues in foods of chemicals not registered with the Environmental Protection Agency, the United States recently imposed a temporary ban on EC wine imports containing a fungicide called procymidone until the health risk can be adequately determined. The EC and the United States are engaged in consultations on the temporary import ban.
- A possible EC ban on certain furs caught in countries that permit the use of steel leghold traps would restrict U.S. fur trade. There is widespread support in the United States as well as in Europe for the development of more humane traps. However, the U.S. Government opposes the imposition of an arbitrary deadline to meet standards that have not yet been developed and argues that trapping serves the desirable environmental goal of managing the population of fur-bearing animals.

PROCESS AND TIMING OF THE NEGOTIATIONS

The Uruguay Round negotiations are an ambitious attempt to open markets as well as to meet the challenges posed by the greatly increased complexity of trade, trade barriers, and the firms involved in trade. Successful completion of the Uruguay Round would encourage growth and raise living standards in the United States and around the world. Success would also help defuse trade tensions and conflicts that might otherwise escalate. The use of costly agricultural export subsidies, for example, might increase if the Uruguay Round fails. Moreover, complaints from U.S. industries about unfair trade practices might rise, possibly increasing the use of retaliatory actions under U.S. trade law. For these reasons, the Administration has encouraged all nations to make the commitments necessary to bring the Uruguay Round to a successful conclusion.

The Uruguay Round talks were scheduled for completion in early December 1990 at a meeting in Brussels. Due to an impasse in the part of the talks dealing with agriculture, the Brussels meeting broke down, and the Uruguay Round talks were suspended with no formal agreements in any of the many areas of negotiation. The impasse occurred when countries could not agree on a basis for detailed negotiations concerning agricultural export subsidies, domestic farm policies that affect trade, and agricultural import barriers.

Trade negotiations are based on what is referred to as an "exchange of concessions." That is, negotiators talk about mutual policy reforms as if they were exchanging concessions, even though the reforms would benefit countries on all sides of the bargaining table. For instance, as discussed above, U.S. import restrictions on clothing cost American consumers billions of dollars a year. Yet, developing countries ask the United States to make concessions on clothing—that is, to open further the U.S. market to clothing imports—before they will make market-opening concessions that are likely to save their consumers billions. The word "concession" is used because domestic producers who compete with imports tend to resist such market opening. This exchange-of-concessions approach has been quite successful in previous GATT rounds, primarily because it allows governments to counter national groups opposed to opening the domestic market with the political influence of domestic exporters who seek market openings in other countries.

AREAS OF NEGOTIATION

The Uruguay Round talks have addressed three goals: reducing barriers to trade, extending GATT rules to new sectors, and improving GATT rules by strengthening and updating them to match modern commercial realities. In pursuit of these goals, the negotiations have proceeded on a wide range of areas, several of which are discussed below.

Tariff Reduction and Elimination

A very important part of the negotiations is the reduction of tariffs. Participants in the Uruguay Round have already agreed to reduce the average of their tariff rates by about one-third. They have not, however, agreed upon the specific products on which tariffs will be cut. A vast number of products may be affected. The United States, for instance, has requested foreign tariff cuts on thousands of specific products and has offered to cut U.S. tariffs on thousands of products.

The United States has also put forth a novel tariff-cutting proposal called the Zero for Zero Initiative. Under this initiative the United States offers to cut U.S. tariffs to zero in particular sectors—such as steel, electronics, construction equipment, and pharmaceuticals—if other countries agree to cut their tariffs to zero in the same sectors. *When fully implemented, the initiative would result in free-trade sectors (FTSs) involving thousands of products made in scores of countries, thereby improving export opportunities for a large number of companies.* The volume of U.S. exports that would be covered by the proposed FTSs is larger than the volume of U.S. exports to Canada, the Nation's largest trading partner.

Agriculture

The strongest advocates of reducing protection of agriculture in the Uruguay Round have been the United States and a coalition of 14 food exporting nations known as the Cairns Group, which includes Australia, Canada, and New Zealand, as well as Argentina and several other developing nations. *Indeed, the importance of an agriculture agreement to some nations has had broad implications for the entire Uruguay Round.* Key trading countries from the developing world, including Brazil, Indonesia, Malaysia, Thailand, and several others, have expressed a reluctance to forge agreements unless agricultural reform is also negotiated and other issues of great interest to them are addressed. The Cairns Group has threatened to reject agreements on all other issues unless comprehensive agricultural policy reform is achieved.

Agricultural trade makes up about one-tenth of world trade, yet it has never been seriously subject to GATT discipline. Indeed, virtually every government intervenes in its agricultural sector. Particularly in industrial economies, agricultural policies often promote producers' interests through trade barriers or subsidization. The EC maintains high domestic food prices with a maze of import barriers and export subsidies that largely insulates its 8 million farmers from world market forces. Japan and South Korea maintain even higher barriers against most food imports. Canada, the United States, and many other nations also protect their agricultural sectors to some degree in a variety of ways.

The EC provides a prime example of government protection of agriculture. The EC was once a major food importer. Now government-controlled prices are set so high that European farmers produce much more than European consumers wish to buy. To dispose of these surpluses, the EC must subsidize exporters to buy EC products at the high internal prices and sell them on the world market at much lower prices. Other countries may have to match the EC's subsidized export prices if they are to compete in the world market. The net result of these and other similar practices is that world prices of many agricultural products are significantly depressed and resources are inefficiently allocated. In 1987, the first full year of the Uruguay Round negotiations, the EC spent about $10 billion on export subsidies and the United States spent about $1 billion (Box 7-3).

An agreement to reduce agricultural trade barriers and subsidies would bring significant efficiency gains to the global economy. By allowing market forces to determine agricultural production and prices, such reductions would increase the amount of trade in most agricultural commodities and, according to one study, would add $35 billion annually, in real terms, to the combined income of developed market economies. The largest efficiency gains would accrue to the economies of the EC, the United States, and Japan. In Europe manufacturing output and total employment would increase, while in Japan land and food prices would fall. Despite these beneficial effects, Europe and Japan have strongly resisted reform, partly because of the high levels of protection that existing barriers give to their politically powerful farm groups.

The United States, which exported about $40 billion worth of agricultural products in 1990, has a large stake in achieving comprehensive agricultural policy reform. It has been estimated that the net effect of global agricultural protection lowers the U.S. agricultural trade balance by $3 billion. While U.S. exports are a key concern, the U.S. interest in an agriculture agreement has other dimensions too. For example, reducing domestic farm subsidies could help reduce the U.S. budget deficit. Resistance to reducing domestic farm programs unilaterally is strong, however, partly because the programs help offset the price-reducing effects of other countries' farm subsidies.

The United States could increase the efficiency of its economy by unilaterally reducing the degree of protection in agriculture. Indeed, as described in Chapter 4, the United States has already taken important steps toward farm policy reform. However, if the United States reformed its agricultural policies in concert with others, U.S. farmers would face more open export markets and more favorable market prices. One study estimates that world market prices would have been roughly 20 percent higher in 1986–87 in the absence of subsidies and trade barriers worldwide.

Textiles

Trade in textiles and clothing accounts for about one-tenth of all manufactured exports. This trade is particularly important to de-

Box 7-3.—Export Subsidies: Who Gains and Who Loses?

If the Uruguay Round fails, an increase in the subsidization of agricultural exports, especially by the European Community (EC) and the United States, is a distinct possibility. Indeed, the Congress has already authorized an additional $1 billion for U.S. export assistance, to be used to offset EC subsidies, should the round fail.

Who gains and who loses when a country imposes export subsidies? Its domestic farmers gain, since they secure higher prices and greater exports. Its taxpayers lose, since they pay for the subsidies. Its consumers can also lose because the subsidies typically raise domestic food prices. That is because export subsidies encourage farmers to sell more to foreign markets, making less available at home. Adding up the gains and losses to farmers, taxpayers, and consumers, the subsidizing country as a whole is usually worse off.

Other nations that export agricultural products may have to counter with expensive export subsidies of their own or risk being squeezed out of world markets. Consumers in countries that import the subsidized exports may welcome the lower food prices that result, but farmers in those countries would be harmed. Many food importers are developing countries with relatively large shares of their populations working on farms. By depressing food prices in importing countries, subsidized exports can create an artificial disincentive to agricultural investment.

Despite their high domestic costs, countries may be willing to bear the burden of export subsidies in the short run. If U.S. subsidies, for example, counter EC subsidies effectively by displacing EC sales in export markets, the European Community may agree to reduce its subsidies and return trade to a freer basis. The risk of this strategy is that a "subsidy war" may occur, which can send food prices in international markets down and taxpayer costs at home up.

veloping nations, since it accounts for almost a quarter of their manufactured exports. The continued existence and increasing restrictiveness of the global management of textile trade has eroded the confidence of many developing nations in the GATT system.

One of the goals of the United States and other nations in the Uruguay Round is to phase out the policies that currently control textile and clothing trade. The negotiations are aimed at establishing a mechanism to return trade in this sector to the regular rules of GATT over a certain period of time. The transition mechanism being considered in the negotiations would use the basic structure of the Multi-Fiber Arrangement for those textile and apparel products currently under quota. During the transition the growth rates of these quotas would be increased, and certain products would be progressively integrated into GATT. Furthermore, a special procedure would allow new quotas to be placed on uncovered products and suppliers to keep these imports from disrupting domestic production. If the Uruguay Round talks succeed in phasing out textile and clothing protection, U.S. consumers would save billions of dollars annually.

Services

In 1989 American companies exported over $100 billion of services, making the United States the world's largest exporter of services. International trade in services, such as insurance, banking, and tourism, accounts for about one-fifth of world export earnings. One important aim of the Uruguay Round is to include in the GATT system a multilateral agreement on principles and rules for trade in services, as well as to eliminate progressively impediments to trade in services. The talks have focused on obtaining a services agreement consisting of three parts: a broad framework agreement—called the General Agreement on Trade in Services—that would lay out principles and rules governing services trade; a set of annexes that would discuss particular service sectors in detail; and a list of commitments by countries to open their services markets to foreign firms.

Negotiations in this area are so new that even the definition of trade in services had to be addressed. The proposed agreement defines services trade as the supply of a service by a firm from one country to a consumer from another country. This definition covers cases in which the firm is located in the consumer's market (such as in banking), the consumer travels to another country to purchase services (such as in tourism), or the firm and consumer are located in different countries (such as telecommunications). The proposed agreement also had to define what constitutes a barrier to trade in services. The proposed definition states that countries should not discriminate among foreign service companies and should treat foreign service firms no less favorably than domestic firms. Any deviation from this standard would constitute a trade barrier. An example of a barrier to trade in services under this definition would be a law that makes it difficult for an insurance firm from one country to set up in another country. One other important principle that would be established by the proposed trade-in-services agreement involves "transparency." This principle would require countries to publish all laws and regulations that affect trade in services.

Intellectual Property Rights

In 1989 U.S. export earnings from royalties and licensing fees amounted to $12 billion. In the United States and most other industrialized nations, the rights of knowledge creators to earn profits on their creations are protected by laws that make it illegal to pirate patents, software, books, records or tapes, or to sell counterfeit goods. In many countries, particularly in the developing world, laws to protect these rights, known as intellectual property rights, do not exist or are not well enforced. As a result, piracy and counterfeiting of trademark goods and services are widespread. The U.S. International Trade Commission estimated that U.S. industry loses many billions of dollars a year to piracy and counterfeiting. The aim of the United States in the Uruguay Round has been to negotiate a set of international rules governing trade-related intellectual property rights and to erect an effective system to ensure that obligations under GATT and other agreements to protect these rights are enforced.

Investment

The globalization of modern companies means that barriers to foreign investment act as barriers to trade. Because companies investing in foreign countries tend to import many of the inputs they use in production and to export a significant portion of their output, restrictions on investment directly affect the flow of trade. The Uruguay Round has included negotiations on new rules that would restrict the use of investment policies that inhibit or distort trade.

There is no generally accepted definition of what constitutes such a trade-related investment measure (TRIM). Examples include government requirements that foreign multinational corporations use specific amounts of locally produced goods in their products, that foreign corporations export a certain share of their output, and that foreign investors may only use a limited amount of the foreign exchange they earn to purchase inputs. Current GATT rules indirectly cover a few of these measures, but the rules are neither comprehensive nor clear, and their application to developing countries has never been tested.

The U.S. position, shared by most industrialized countries, is that GATT should prohibit TRIMs that inherently restrict or distort trade, establish a test to discipline those nonprohibited TRIMs that can have adverse trade effects, and develop a timeline to phase out existing prohibited TRIMs. The negotiations have been hindered, however, by deep differences of opinion between developed and developing countries. Many developing countries, which are largely host countries for foreign direct investment, insist that control of such investment through TRIMs is crucial to achieving their development objectives.

In the long run, given the increasing overlap between investment and trade activity, it is desirable to have strong GATT rules covering all aspects of foreign investment—not merely trade-related foreign investment—analogous to those that cover trade. Even if the Uruguay Round adopts rules regarding trade-related investment measures, nothing comparable to GATT's rules on goods trade would exist for investment. Establishing common, multilateral rules for investment throughout the world is a high priority for the United States because differences in foreign investment policies across countries reduce the benefits that stem from the global production networks of multinational corporations.

Dispute Settlement

An effective and reliable dispute settlement mechanism is an important component of the GATT system. One of the most significant ways in which the Uruguay Round may strengthen the rules-based international trading system is by improving the GATT mechanism that is used to settle many trade disputes among nations. The current procedure establishes a panel of experts that decides the merits of the dispute and announces its findings. While this system has performed reasonably well in many cases, in recent years some nations have complained that the process is too slow and unreliable. These shortcomings reduce the credibility of the multilateral dispute settlement procedure and erode confidence in the GATT system as a whole. Procedural changes that have resulted from the ongoing negotiations have already improved the process. The final goal is a dispute settlement procedure that is swift, reliable, and effective.

Safeguards

GATT recognizes that countries may need to impose new import restrictions to allow import-sensitive industries time to adjust to shifts in competitiveness. Temporary import restrictions for this purpose, so-called safeguard measures, can be imposed if increased imports cause, or threaten to cause, serious injury to an industry. As a general principle, GATT indicates that import restrictions should be tariffs, rather than quotas or other quantity restrictions, and that these measures should be applied equally to all trading partners. GATT also allows all countries affected by the safeguard measures to retaliate or request compensation from the country that imposes them.

These conditions have discouraged the use of GATT's safeguard provisions. As a consequence, countries often rely on bilateral arrangements, such as voluntary export agreements, to limit imports. The EC is by far the leading user of these arrangements, but the

United States, Japan, Canada, Sweden, Switzerland, Norway, and Finland have also used them. These arrangements are not subject to GATT rules of any kind. Their use allows political pressures, rather than market forces, to influence trade flows. These arrangements also tend to favor old suppliers over new suppliers, and to exclude third countries (which may be indirectly affected) from discussion of the design, implementation, and removal of the restrictions. Uruguay Round negotiators are seeking new rules to clarify the conditions under which safeguard measures may be taken and to discourage the use of voluntary export agreements.

Antidumping

The term "dumping" can describe selling a product at lower prices in some countries than in others or selling a product below cost. GATT allows a country whose industries are injured by the dumping of imports to impose a special tariff called an antidumping duty. In the Uruguay Round the United States and other nations seek to update GATT's antidumping rules to match modern commercial realities and to standardize and clarify procedures for investigations of alleged dumping.

SUMMARY

- The United States and other nations are endeavoring to strengthen, extend, and modernize GATT's rules governing international trade, as well as to reduce trade barriers worldwide.
- Long-run U.S. goals of multilateral trade liberalization are embodied in the positions taken by the United States in the Uruguay Round. These include extending GATT discipline to trade in agriculture, textiles, services, and intellectual property; ensuring that developing countries take on the full obligations of GATT; establishing explicit international rules for foreign investment; and making the GATT dispute settlement mechanism swift, fair, and effective.
- Successful completion of the Uruguay Round is important to the future growth and prosperity of the United States and the world.

U.S. PRO-TRADE INITIATIVES IN THE AMERICAS AND ELSEWHERE

The primary thrust of U.S. trade policy is to use multilateral discussions and fora such as GATT and the Organization for Economic Cooperation and Development to promote free, rules-based trade. Indeed, the multilateral Uruguay Round negotiations are the President's top trade priority. The Administration, however, has made substantial progress toward promoting trade via other channels. This progress is evident in a number of regional and bilateral pro-trade initiatives, as well as in the avoidance of increased protection and a reduction of the overall level of tension in our trade relationships.

U.S.-MEXICO FREE-TRADE AREA

In June 1990 the Presidents of the United States and Mexico strongly endorsed the goal of a comprehensive free-trade agreement between the United States and Mexico (Box 7–4 and Chart 7–2). Such an agreement would progressively eliminate impediments to trade in goods and services and to investment, as well as protect intellectual property rights. The United States already has free-trade agreements with Canada (signed in 1988) and Israel (signed in 1985). In addition, the United States, Mexico, and Canada have been consulting on the possibility of a trilateral negotiation.

Mexico has reduced its trade barriers as part of its across-the-board market reform effort (described in Chapter 6). Since 1985 Mexico has reduced by roughly 70 percent the product coverage of a form of import restriction known as import licensing. Mexico has also lowered its tariffs from an average of roughly 30 percent in 1985 to about 10 percent in 1989. However, this 10-percent average is still much higher than the 4-percent average tariff that the United States has on imports from Mexico. A free-trade agreement would eventually bring both numbers to zero on U.S.-Mexico trade and would eliminate many nontariff measures.

A free-trade agreement would boost the international competitiveness of both U.S. and Mexican firms. To reduce costs, companies often allocate phases of a manufacturing process among a number of nations. A free-trade agreement with Mexico would further encourage this natural international division of labor. By lowering the overall costs of U.S. manufacturing firms, a free-trade agreement would make U.S. firms more competitive against imports in the United States and against other countries' exports in the world market. This gain in manufacturing competitiveness encourages productivity and higher wages. The proposed free-trade agreement would similarly boost the competitiveness of Mexican firms. Additionally, the two-way reduction in trade barriers would benefit Mexico by supporting its market reforms and encouraging economic growth.

INITIATIVES FOR THE AMERICAS

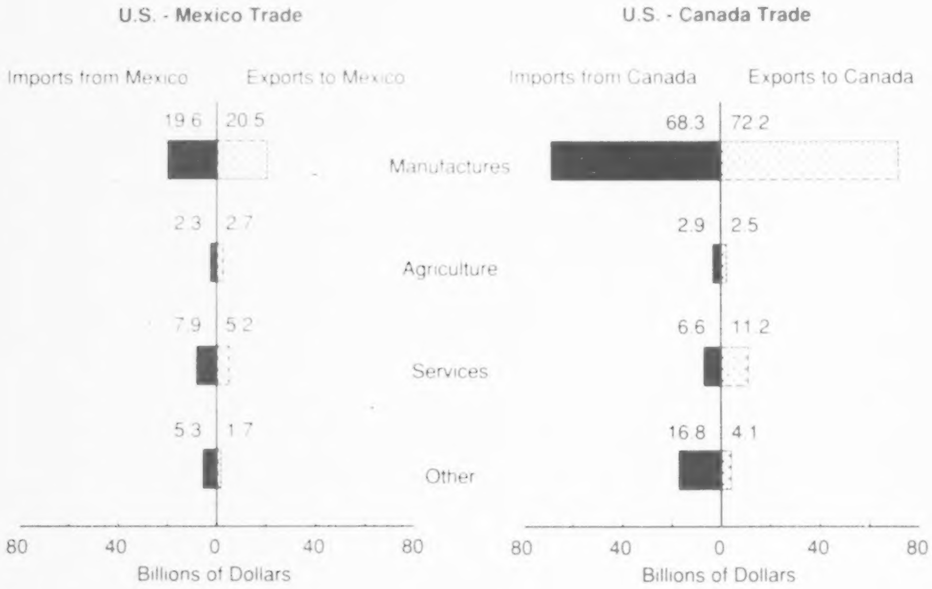
In June 1990 the President unveiled his Enterprise for the Americas Initiative, which will, among other things, pave the way to free trade throughout the Western Hemisphere. The proposed legislation addresses three issues: trade, investment, and debt. Chapter 6

Box 7-4.—The Composition of U.S.-Mexico Trade

Mexico is the third largest trading partner of the United States, after Canada and Japan. About 6 percent of U.S. exports went to Mexico in 1989, while about 5 percent of U.S. imports came from Mexico. The composition of trade with Mexico is quite similar to the U.S.-Canada trade pattern, as can be seen in Chart 7-2. Most U.S.-Mexico trade is two-way trade in manufactured goods. A closer look at the manufactures category reveals that much of this trade is two-way trade in similar products. The four largest U.S. exports to Mexico in 1989 were auto parts, processed food, electronic components, and electrical switchgear. The four largest imports from Mexico were autos and auto parts, electrical distributing equipment, telecommunications equipment, and electrical switchgear. Trade between the United States and Mexico in the manufacturing sector is almost balanced, due largely to Mexico's *maquiladora* program. *Maquiladoras* are export-oriented plants, most often located close to the U.S.-Mexico border, that are exempt from paying import duties on raw materials and parts that are used in making final products. In 1988 about 45 percent of U.S. merchandise imports from Mexico originated in the *maquiladoras*.

Chart 7-2 **U.S. Trade with Mexico and Canada, 1989**

Two-way trade in manufactured goods dominates U.S. bilateral trade with both Mexico and Canada



Source: Department of Commerce

discusses the investment and debt aspects of the Enterprise for the Americas Initiative. *On the trade side, the Enterprise for the Americas Initiative would establish a process that would eventually lead to a hemisphere-wide system of free trade.* As a first step in this direction, the United States would sign bilateral framework agreements with any interested country or group of countries in the region. These agreements facilitate discussion of means to eliminate impediments to trade and investment. The United States has entered into these agreements with Bolivia, Colombia, Chile, Ecuador, Honduras, and Costa Rica. Negotiations have begun bilaterally with Venezuela, Peru, and Nicaragua, as well as with Argentina, Brazil, Uruguay, and Paraguay as a group. Framework agreements are also a possibility in the near future with El Salvador, Guatemala, Panama, Jamaica, and several other Caribbean countries. The next step is to negotiate free-trade agreements with individual countries and groups of countries. Chile, which has a history of open markets, has expressed strong interest in pursuing a free-trade agreement with the United States.

In October 1990 the President sent the Andean Trade Preference Act to the Congress. This proposal would eliminate U.S. import duties on many products imported from Bolivia, Colombia, Ecuador, and Peru. A major goal of this unilateral market-opening initiative is to help these countries battle the production, processing, and shipment of illegal drugs by offering them opportunities to expand production and trade of products that are legal. Passage of this legislation early in 1991 is an important priority for the President. It will help in the fight against drugs and also help promote trade and prosperity in the hemisphere.

STRUCTURAL IMPEDIMENTS INITIATIVE

One of the most significant developments in U.S. international economic policy in recent years is the U.S.-Japan Structural Impediments Initiative. This initiative is a new, cooperative approach to opening markets. Instead of focusing on specific sectoral trade barriers, the initiative is aimed at identifying and removing more basic impediments to trade, market competition, and balance of payments adjustment. The initiative produced a joint report in June 1990. On the Japanese side, the joint report focused on a number of areas, including the aggregate saving and investment balance; laws regarding land use; the structure of the Japanese distribution system, which restricts the establishment and operation of large retail stores in Japan; the organizational behavior of Japanese conglomerates known as *keiretsu*; enforcement of Japan's antimonopoly laws; improved financial disclosure by Japanese firms; and improved procedures for awarding patents. In the joint report, the United States recognized that priority issues for U.S. policy include reducing the Federal budget deficit, stimulating private saving, and improving education and training of U.S. workers.

SUMMARY

- In addition to pursuing market opening through multilateral fora, the United States has undertaken several regional and bilateral pro-trade initiatives such as the proposed U.S.-Mexico free-trade agreement, the Enterprise for the Americas Initiative, and the Structural Impediments Initiative.
- The proposed U.S.-Mexico free-trade agreement would boost the international competitiveness of both U.S. and Mexican firms, as well as increase efficiency, flexibility, and growth in both economies.
- The ultimate goal of the trade liberalization components of the Enterprise for the Americas Initiative is a hemispheric system of free trade.

MULTINATIONAL CORPORATIONS AND THE TRADE-INVESTMENT LINKAGE

The 1990s are likely to be marked by the increased globalization of companies, a trend that began in the early post-World War II years and continued throughout the 1980s. The greater global integration of the operations of multinational corporations is the result of increasing foreign direct investment—defined as the development of a new business or acquisition of an established business in a foreign market. It complements the globalization of markets engendered by the expansion of trade.

Indeed, the globalization of companies results in a close connection between trade and investment. This connection can be seen quite clearly in the remarkable extent to which border-spanning companies are involved in trade. About 25 percent of all U.S. exports and 15 percent of all U.S. imports, for example, are actually transfers between parents of multinational corporations and their affiliates abroad; that is, the goods are transferred within the same company, even though they cross international boundaries. The internationalization of operations underlying such "intrafirm" trade often means that a new product marketed globally is the fruit of research and development performed in one country, engineering carried out in a second, and production performed in a third.

The globalization of companies is a two-way street; many countries in which U.S. multinationals are most active are also the ones that are the most active investors in the United States (Box 7-5 and Chart 7-3). The global nature of companies has so progressed that sometimes it is difficult to decide which firms are foreign.

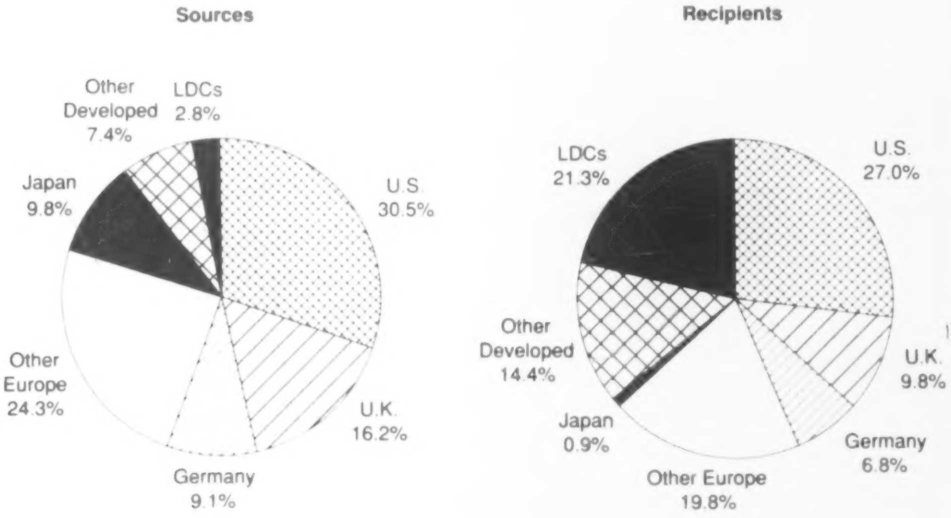
Honda, for example, sells more cars in the United States than it does in Japan. In fact, some Hondas sold in Japan are actually made in Ohio. Whirlpool, while headquartered in Michigan, employs about 39,000 people, most of whom are non-American, in 45 different countries.

Box 7-5.—Foreign Direct Investment: Who Invests and Where?

For most of the period immediately following World War II, only companies based in the United States and in a few other countries developed or acquired businesses in other countries. Such foreign direct investment was mostly in one direction. Countries that did the investing were rarely the recipients of foreign direct investment. Today, the United States not only continues to be the leading source of foreign direct investment, with $373.4 billion held abroad in 1989, but, as Chart 7-3 shows, it is also the largest recipient of foreign direct investment.

Chart 7-3 **World Stocks of Foreign Direct Investment, 1988**

Many countries that provide large amounts of foreign direct investment are also large recipients. Indeed, the United States is both the largest source and the largest recipient.



Note: Data are based on world stocks of direct investment.
Source: Department of Commerce.

Statistics on foreign direct investment reflect historical purchase prices, not current market values. Thus, comparisons of stocks of foreign direct investment can be quite misleading. For instance, the reported stock of foreign direct investment in the United States reached $400.8 billion at the end of 1989 and exceeded the reported stock of U.S. direct investment abroad by $27.4 billion. But much of U.S. direct investment abroad was made in the 1950s and 1960s, while the bulk of foreign direct investment in the United States was made more recently. Because prices have risen considerably since the 1960s, it is likely that the current value of U.S. holdings abroad exceeds the current value of foreign direct investment in the United States.

THE BENEFITS OF FOREIGN DIRECT INVESTMENT

Foreign direct investment in the United States is a sign of strength in the economy, not of weakness. It is also a sign of the increasing internationalization of the economy through which U.S. firms will be strengthened and made more competitive. This investment and the global orientation of companies benefit the United States. The unhindered flow of foreign direct investment leads to additional productive resources in the United States and facilitates the realization of cost-efficient scales of business by consolidating under one corporate roof separate, but related, operations. These boost the productivity and international competitiveness of the United States, create jobs, and promote innovation and productivity. The inflow of foreign capital helps to sustain U.S. investment, despite the current low U.S. national saving rate, and thus contributes to economic growth.

When U.S. multinationals first set up in Europe during the 1950s and 1960s, many Europeans feared that Europe was being bought out by Americans and that their economies were being Americanized. In retrospect, these concerns were unfounded. U.S. direct investment has benefited the European economies. The recent increase in foreign direct investment in the United States will similarly benefit the U.S. economy.

U.S. direct investment abroad also benefits the United States. Extensive production networks of U.S. multinational corporations confer several advantages. One is the ability of such companies to compete more effectively in foreign markets by locating production facilities there, rather than by exporting to those markets. Profits generated by such activities can flow back to the United States, and U.S. affiliates abroad often create demand for exports of U.S. production inputs, services, and technology. Foreign direct investment also provides insurance against the risk of new "host" country restrictions on trade. Finally, U.S. direct investment abroad contributes to the economic health of our trading partners, which, in turn, fosters greater U.S. economic growth.

U.S. multinational corporations—from computer and electronics companies to pharmaceutical companies—are often at the cutting edge of technology creation. Moreover, they perform the vast majority of their research and development activities in the United States. U.S. multinationals are also major employers of American workers. The ratio of manufacturing jobs to service and wholesaling jobs was about one-fifth higher in U.S. multinationals' parent operations than in their foreign operations in 1988. In general, U.S. multinational corporations today orient their operations toward the U.S. market. Indeed, according to the most recent figures, about three-fourths of total worldwide assets of U.S. multinationals are located in the United States. This share has increased from a decade earlier despite the growth of U.S. direct investment abroad.

It has been claimed that overseas production by U.S. multinational corporations displaces U.S. exports and, in effect, American jobs. A related concern is that U.S. multinationals produce goods abroad and import them into the United States, rather than producing them domestically. Underlying these claims is the mistaken presumption that if U.S. direct investment abroad did not take place, production would have been maintained at home and U.S. exports to foreign markets would have continued. In most cases, if U.S. multinationals did not establish affiliates abroad to produce for the local market, they would be too distant to have an effective presence in that market. In addition, companies from other countries would either establish such facilities or increase exports to that market. In effect, it is not really possible to sustain exports to such markets in the long run. *On a net basis, it is highly doubtful that U.S. direct investment abroad reduces U.S. exports or displaces U.S. jobs.* Indeed, U.S. direct investment abroad stimulates U.S. companies to be more competitive internationally, which can generate U.S. exports and jobs. Equally important, U.S. direct investment abroad allows U.S. firms to allocate their resources more efficiently, thus creating healthier domestic operations, which, in turn, tend to create jobs.

Another issue raised about multinational corporations is that the exports and imports they trade internally do not adjust as completely in the short run to exchange-rate changes as do goods that are traded between unrelated firms. Because of the long-run cost efficiencies associated with maintaining extensive global production networks and because some percentage of a multinational's plant and equipment may not be completely salvageable if facilities are moved, some intrafirm trade flows may well not adjust rapidly to shifts in exchange rates.

Of course, like all trade flows, intrafirm exports and imports do adjust to changes in exchange rates over time. Even in the absence of multinational enterprise, however, the open market for many of the types of products traded internally by multinationals is likely to be dominated by long-term contracts. That is because international business investments typically are economically risky and involve large commitments of capital and highly specialized assets. Thus, any apparent temporary rigidities in multinational corporate trade behavior reflect the fact that these firms have established efficient configurations of operations in the global marketplace. Nonetheless, relatively slow responses of internal exports and imports of multinational corporations to changes in exchange rates may subject U.S. economic policymakers to significant pressure to place restrictions on the way these firms build and maintain their networks of operations. *Imposing such investment-restricting measures will result not only in corporate efficiency losses, and thus potentially lower employment and a decline in profits, but also in a decrease in U.S. competitiveness.*

Foreign multinationals operating in the United States act in ways that are similar to U.S. multinationals in America. Table 7-1 shows that in terms of paying their employees and the value added per employee, these two types of multinationals are roughly the same.

TABLE 7-1.—*Parents of U.S. Multinational Corporations vs. U.S. Affiliates of Foreign Multinational Corporations: U.S. Operations in 1988*

[Dollars]

	Parents of U.S. multinationals	U.S. affiliates of foreign multinationals
Average compensation per employee	33,154	30,517
Gross product per employee[1]	54,229	47,117
U.S. intrafirm exports per employee	4,491	6,637
U.S. intrafirm imports per employee	3,777	31,045

[1] Data are for 1987.

Sources: Department of Commerce and Council of Economic Advisers.

In the area of intrafirm trade, however, there are pronounced differences. U.S. affiliates of foreign multinationals export and import more per employee than U.S. multinationals operating in America. While the difference in export behavior is appreciable—exports per employee are 48 percent higher for U.S. affiliates of foreign multinationals than for parents of U.S. multinationals—the more than eightfold difference in import behavior is particularly striking. The difference in import behavior is explained in part by the fact that a significant number of the U.S. affiliates of foreign multinationals act primarily as wholesale marketing offices for their parent companies. The higher import propensity is also a natural outcome of the relative newness of foreign multinationals in the United States. When U.S. multinationals first set up in Europe during the 1950s and 1960s, they also tended to import more than local companies.

Judging from history, it seems likely that foreign multinationals operating in America will tend to become more "local" with time. As Table 7-2 shows, the importance of imports in the input purchases of U.S. affiliates of foreign multinationals has been decreasing. Correspondingly, foreign multinationals are increasing the extent of vertical integration in their American operations, producing in the United States more of the inputs they use. Moreover, the local content of products made in the United States by foreign multinationals is quite high and has been rising.

TABLE 7-2.—*Parents of U.S. Multinational Corporations and U.S. Affiliates of Foreign Multinational Corporations: Input Supply Choices, 1977 vs. 1987*

[Percent]

	1977	1987
Vertical integration (ratio of gross product to sales)		
Parents of U.S. multinationals	37	37
U.S. Affiliates of foreign multinationals	18	21
Import propensity in input purchases (ratio of imports to total purchase of inputs)		
Parents of U.S. multinationals	9	8
U.S. Affiliates of foreign multinationals	27	24
Local content (ratio of local inputs to sales)		
Parents of U.S. multinationals	95	95
U.S. Affiliates of foreign multinationals	79	81

Sources: Department of Commerce and Council of Economic Advisers.

Although foreign direct investment in the United States has increased greatly in recent years, the involvement of foreign firms in America is low by international standards. Indeed, foreign multinationals account for only about 4 percent of U.S. jobs and business output. Moreover, the recent rise in foreign direct investment is not unique to the United States but part of the worldwide trend toward the international integration of markets and companies. Another visible manifestation of this trend is the rise in joint ventures, technology- and production-sharing arrangements, and other forms of international alliances. Such partnerships are found in many industries, such as medical equipment and computer chips.

U.S. FOREIGN DIRECT INVESTMENT POLICY

The complex linkages between trade flows and production operations of multinational corporations underscore the importance of not creating barriers to the free flow of foreign direct investment into the United States. Such barriers would subvert the natural forces of the global marketplace and reduce efficiency and growth. *The benefits engendered by the global production and trade networks of modern multinational corporations point to the undesirability of devising policies aimed at restricting foreign investment.*

Questions raised about what differentiates a "domestic" firm from a "foreign" firm, while conceptually interesting and important, distract from policy questions about how to maintain the strength and flexibility of the U.S. economy. The Administration supports maintaining an open foreign investment policy, with limited exceptions related to national security. This policy produces the greatest possible national benefits from all investments made in the U.S. economy. The United States has long recognized that unhindered international investment is beneficial to all nations, that it is a "positive sum game."

The growing importance of foreign direct investment in the United States has raised concerns about the adequacy and quality of the Federal Government's statistics on foreign direct investment in the United States. The Foreign Direct Investment and International Financial Data Improvements Act, signed by the President in 1990, significantly upgrades government information on this score. Among other things, the new legislation provides for greater coordination among Federal statistical agencies in the collection, sharing, and assessment of data on foreign direct investment in the United States; permits analysis of such data at a more disaggregated level than was previously feasible; and requires the Secretary of Commerce to report annually on the role and significance of foreign direct investment in the United States. These improvements will be accomplished with no additional reporting requirements on businesses and by preserving the principle of nondisclosure of confidential information.

SUMMARY

- The 1990s are likely to be marked by greater global integration of the operations of multinational corporations as a result of increasing foreign direct investment. Concomitantly, the flow of international trade carried out by multinational corporations, especially intrafirm trade, is growing.
- Foreign direct investment in the United States benefits the Nation by providing additional productive resources, thus helping to create jobs and increase productivity. U.S. direct investment abroad benefits the United States by enhancing the competitiveness of U.S. companies, by generating exports, and by contributing to the economic health of our trading partners.
- U.S. affiliates of foreign multinational corporations operate very similarly to U.S.-based multinationals, except that they tend to export and import more. However, this pattern is typical of businesses of such young vintage, and over time this difference is expected to diminish.
- Maintaining an open U.S. and multilateral foreign investment policy, one that results in the greatest possible benefits of in-

vestment without regard to the nationality of investors, remains an important U.S. economic policy objective.

CONCLUSION

International trade and investment have promoted growth and prosperity not only in the United States, but throughout the world. Although largely the product of natural economic forces, trade growth has also been encouraged by the reduction of trade barriers brought about by multilateral, bilateral, and regional market-opening initiatives. Multilateral market-opening talks organized by GATT have been instrumental in reducing trade barriers. Markets in the Western Hemisphere have also been opened by the U.S.-Canada Free-Trade Agreement, and will be opened further if the proposed U.S.-Mexico free-trade agreement and the hemisphere-wide free-trade system envisioned in the President's Enterprise for the Americas Initiative are realized.

In the Uruguay Round, the United States and other countries are seeking to extend, modernize, and reinforce GATT rules, and to reduce trade barriers further. Successful completion of the round and the continued openness of markets worldwide are important. A failure of the Uruguay Round might encourage protectionist pressures that could lead to rising trade barriers around the world. Just as falling trade and investment barriers stimulated growth in trade and incomes, a retreat away from open markets could decrease growth and prosperity. Indeed, if the resulting closing of markets were abrupt and severe enough, it could contribute to a worldwide recession.

The expansion of trade is complemented by the greater globalization of corporations. Indeed, imports and exports between the parents of multinational corporations and their affiliates abroad now account for a significant portion of international trade flows. As a result, today's highly integrated world marketplace is one in which the benefits of trade are generated worldwide by rapid diffusion of new technologies, lower production costs, and greater product choice for consumers. The presence in the U.S. economy of multinational corporations—both U.S.-owned and foreign-owned—is in the Nation's interest. An important U.S. economic policy objective is to maintain open markets for both trade and foreign investment.

Appendix A

REPORT TO THE PRESIDENT ON THE ACTIVITIES OF THE COUNCIL OF ECONOMIC ADVISERS DURING 1990

LETTER OF TRANSMITTAL

COUNCIL OF ECONOMIC ADVISERS
Washington, D.C., December 31, 1990

MR. PRESIDENT:

The Council of Economic Advisers submits this report on its activities during the calendar year 1990 in accordance with the requirements of the Congress, as set forth in section 10(d) of the Employment Act of 1946 as amended by the Full Employment and Balanced Growth Act of 1978.

Sincerely,

Michael J. Boskin, *Chairman*
Richard L. Schmalensee, *Member*
John B. Taylor, *Member*

Council Members and their Dates of Service

Name	Position	Oath of office date	Separation date
Edwin G. Nourse	Chairman	August 9, 1946	November 1, 1949.
Leon H. Keyserling	Vice Chairman	August 9, 1946	
	Acting Chairman	November 2, 1949	
	Chairman	May 10, 1950	January 20, 1953.
John D. Clark	Member	August 9, 1946	
	Vice Chairman	May 10, 1950	February 11, 1953.
Roy Blough	Member	June 29, 1950	August 20, 1952.
Robert C. Turner	Member	September 8, 1952	January 20, 1953.
Arthur F. Burns	Chairman	March 19, 1953	December 1, 1956.
Neil H. Jacoby	Member	September 15, 1953	February 9, 1955.
Walter W. Stewart	Member	December 2, 1953	April 29, 1955.
Raymond J. Saulnier	Member	April 4, 1955	
	Chairman	December 3, 1956	January 20, 1961.
Joseph S. Davis	Member	May 2, 1955	October 31, 1958.
Paul W. McCracken	Member	December 3, 1956	January 31, 1959.
Karl Brandt	Member	November 1, 1958	January 20, 1961.
Henry C. Wallich	Member	May 7, 1959	January 20, 1961.
Walter W. Heller	Chairman	January 29, 1961	November 15, 1964.
James Tobin	Member	January 29, 1961	July 31, 1962.
Kermit Gordon	Member	January 29, 1961	December 27, 1962.
Gardner Ackley	Member	August 3, 1962	
	Chairman	November 16, 1964	February 15, 1968.
John P. Lewis	Member	May 17, 1963	August 31, 1964.
Otto Eckstein	Member	September 2, 1964	February 1, 1966.
Arthur M. Okun	Member	November 16, 1964	
	Chairman	February 15, 1968	January 20, 1969.
James S. Duesenberry	Member	February 2, 1966	June 30, 1968.
Merton J. Peck	Member	February 15, 1968	January 20, 1969.
Warren L. Smith	Member	July 1, 1968	January 20, 1969.
Paul W. McCracken	Chairman	February 4, 1969	December 31, 1971.
Hendrik S. Houthakker	Member	February 4, 1969	July 15, 1971.
Herbert Stein	Member	February 4, 1969	
	Chairman	January 1, 1972	August 31, 1974.
Ezra Solomon	Member	September 9, 1971	March 26, 1973.
Marina v.N. Whitman	Member	March 13, 1972	August 15, 1973.
Gary L. Seevers	Member	July 23, 1973	April 15, 1975.
William J. Fellner	Member	October 31, 1973	February 25, 1975.
Alan Greenspan	Chairman	September 4, 1974	January 20, 1977.
Paul W. MacAvoy	Member	June 13, 1975	November 15, 1976.
Burton G. Malkiel	Member	July 22, 1975	January 20, 1977.
Charles L. Schultze	Chairman	January 22, 1977	January 20, 1981.
William D. Nordhaus	Member	March 18, 1977	February 4, 1979.
Lyle E. Gramley	Member	March 18, 1977	May 27, 1980.
George C. Eads	Member	June 6, 1979	January 20, 1981.
Stephen M. Goldfeld	Member	August 20, 1980	January 20, 1981.
Murray L. Weidenbaum	Chairman	February 27, 1981	August 25, 1982.
William A. Niskanen	Member	June 12, 1981	March 30, 1985.
Jerry L. Jordan	Member	July 14, 1981	July 31, 1982.
Martin Feldstein	Chairman	October 14, 1982	July 10, 1984.
William Poole	Member	December 10, 1982	January 20, 1985.
Beryl W. Sprinkel	Chairman	April 18, 1985	January 20, 1989.
Thomas Gale Moore	Member	July 1, 1985	May 1, 1989.
Michael L. Mussa	Member	August 18, 1986	September 19, 1988.
Michael J. Boskin	Chairman	February 2, 1989.	
John B. Taylor	Member	June 9, 1989	
Richard L. Schmalensee	Member	October 3, 1989	

Report to the President on the Activities of the Council of Economic Advisers During 1990

The mission of the President's Council of Economic Advisers, which was established by the Employment Act of 1946, is to provide the President with the best possible economic advice, to develop and recommend economic policies to the President, and to appraise programs and activities of the Federal Government as they pertain to the health of the Nation's economy. In addition to the Council's role in directly advising the President, the Council is represented, usually by the Chairman, at Cabinet meetings, meetings of the Economic Policy Council, the Domestic Policy Council, and the Council on Competitiveness, and at National Security Council meetings on issues of economic importance.

Michael J. Boskin, Richard L. Schmalensee, and John B. Taylor, who comprised the Council at the end of 1989, continued to serve as Council Members in 1990, with Dr. Boskin continuing to serve as Chairman. Dr. Boskin is on a leave of absence from Stanford University, where he is the Burnet C. and Mildred Finley Wohlford Professor of Economics. Dr. Schmalensee is on a leave of absence from the Massachusetts Institute of Technology, where he is the Gordon Y Billard Professor of Economics and Management. Dr. Taylor is on a leave of absence from Stanford University, where he is Professor of Economics.

As it did in 1989, the Council continued to stress the importance of maximizing sustainable economic growth to raise American living standards, setting ambitious but realistic long-term economic goals, and removing barriers to market forces. In its interactions with various outside groups—the Congress, the business community, international organizations, the press—as well as within the Administration, the Council continued to emphasize the Administration's fiscal, monetary, regulatory, and trade policy principles. This year's *Report* follows last year's *Report* in outlining these principles and showing how they are essential for maintaining strong economic growth and improved standards of living.

MACROECONOMIC POLICIES

The Council closely followed macroeconomic developments throughout the year, and emphasized the importance of credible, systematic fiscal and monetary policies as a key to mitigating the recession and ultimately sustaining maximum economic growth.The Council briefed the President and participated in regular discussions on macroeconomic policy issues with the Department of the Treasury, the Office of Management and Budget (OMB), and other members of the President's economic team. The Council also regularly exchanged information and met with the Federal Reserve Board on monetary policy issues and the economic outlook.

The Council and the other members of the "Troika"—Treasury and OMB—continued to produce the Administration's economic forecasts and projections. Usually two official forecasts are published each year: one at the start of the year, which is used as part of the President's budget, and one as part of the Mid-Session Review in July. The Troika's forecasting group is chaired by the Council. Dr. Boskin and Dr. Taylor testified on the forecasts before the Joint Economic Committee. In preparing its forecasts, the Troika continued the practice, initiated in 1989, of developing and publishing alternative sets of economic assumptions to indicate that the forecasts and resulting budget calculations have a considerable degree of uncertainty.

The Council continued to work to improve the general understanding of economics and the quality of economic information through a comprehensive series of memoranda and briefing papers on economic events for the President and the White House Senior Staff, regular briefings for the White House press on major economic news, and meetings with outside economists, forecasters, financial analysts, and business people. The Chairman and the other Council Members appeared before numerous other organizations to explain the Administration's economic achievements, principles, policies, and outlook.

Dr. Boskin continued to chair the Working Group on the Quality of Economic Statistics. Based on the report of the working group, the President approved a list of 25 recommendations for improving economic statistics. During 1990 the Council worked closely with the major Federal statistical agencies to implement these recommendations.

The Council was one of the leading participants in the formulation of the Administration's saving and investment policies through various Cabinet and sub-Cabinet working groups. In testimony to the Congress and in talks to business and other groups, the Chairman and Council Members stressed the importance of raising national saving—by lowering the Federal budget deficit and removing barriers to private saving—to reduce the cost of capital to American firms, stimulate investment, foster research and development, and improve U.S. competitiveness, productivity growth, and standards of living. The Chairman and Council Members also worked through various fora to educate the public and the Congress on the economic benefits of a lower capital gains tax rate.

The Council was also active on a range of budget issues in 1990. As a member of the President's budget review group, the Chairman testified before a number of congressional committees on the economic assumptions used in the budget and on the importance to the economy of lowering the Federal budget deficit, altering the composition of spending more toward investment and research and development (R&D), and maintaining and improving the structure of incentives to work, save, invest, and innovate in the tax system.

INTERNATIONAL ECONOMIC POLICIES

International economic issues again occupied a substantial part of the Council's time during 1990. The Chairman and Council Members stressed the benefits of free trade and open markets for goods, services, and investment and the risk to world economic growth posed by rising protectionism. The Council participated in formulating Administration policy on the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), the proposed U.S.-Mexico free-trade agreement, the Enterprise for the Americas Initiative, and many other issues. The Council also participated in formulating Administration positions on legislation in the international area.

The Council's involvement in forging the Administration's economic policy responses to the Iraqi invasion of Kuwait included participating in interagency studies on the economic effects of the oil shock and the Iraqi embargo on Eastern Europe and the "frontline" states, as well as consideration of Strategic Petroleum Reserve drawdown policy.

During 1990 the Council's involvement in economic reform in Eastern Europe and the Soviet Union increased. Dr. Boskin was one of the three coordinators of U.S. Assistance to Eastern Europe, after serving as one of the leaders of the President's Mission to Poland when economic reforms were put in place in December 1989. The Chairman traveled to the Soviet Union, where he met with a broad range of high-level Soviet economic policymakers and advisers. He also chaired a working group on Soviet economic reform. Dr. Taylor followed up a trip to Poland in 1989 with two additional trips to Eastern Europe in 1990 to meet with and advise senior government officials in several newly democratic countries. Dr. Schmalensee also traveled to several countries in Eastern Europe as part of a Coordinators' Mission to discuss assistance needs with senior government officials. All three held numerous discussions in Washington with officials from Soviet and Eastern European governments.

Dr. Boskin traveled to Paris as part of the U.S. delegation to the Organization for Economic Cooperation and Development (OECD) Ministerial Meeting. He also chaired meetings of the OECD Economic Policy Committee. Dr. Taylor headed the U.S. delegation to the Economic and Development Review Committee at the OECD to assess U.S. economic policy. He was also a member of the U.S. delegation to the OECD Working Party 3 on macroeconomic policy coordination. Dr. Schmalensee headed the U.S. delegation to the OECD Working Party 1 meetings on microeconomic and structural issues and participated in an OECD meeting on integrating economic and environmental issues in preparation for the 1991 OECD Environment Ministerial Meeting.

Dr. Taylor was a member of the U.S. negotiating team for the Structural Impediments Initiative with Japan, attending talks in Tokyo, Bern, Honolulu, Boston, and Washington. He testified before the Trade Subcommittee of the Senate Finance Committee and the International Economic Policy and Trade Subcommittee of the House Foreign Affairs Committee on U.S. trade policy. As part of the Uruguay Round, he co-chaired the GATT market access negotiations and was a Senior Adviser with the U.S. delegation during the week of talks in Brussels. Dr. Schmalensee traveled to Japan to meet with government officials and business leaders for discussions on a variety of economic issues.

The Council provided the President and the White House Senior Staff with regular briefings and analytical materials on international developments, and participated in preparations for the Economic Summit in Houston.

The Council also participated in discussions on a wide range of issues—including developing country debt, economic reform in Eastern Europe, and macroeconomic policy coordination—with other members of the Administration, the Federal Reserve, the World Bank, the International Monetary Fund, and representatives of other countries. The Council Members and the Council Senior Staff conducted numerous briefings on the U.S. economy for visiting officials and scholars.

MICROECONOMIC POLICIES

The Administration considered and proposed action this year on a wide range of microeconomic issues. In its work in this area, the Council repeatedly stressed that government regulation must pass careful cost-benefit tests and that where regulation is appropriate, it should be formulated to allow workers and firms maximum flexibility and to provide incentives to meet social goals in the least costly manner. The Council worked with other agencies to ensure that the newly enacted Clean Air Act to the maximum extent possible both balanced costs and benefits in protecting the environment and minimized the costs of regulation. The Council was also instrumental in ensuring that the Immigration Act, the Americans with Disabilities Act, and the Food, Agriculture, Conservation, and Trade Act were designed to achieve reforms in a more cost-effective manner. The Council emphasized these principles of promoting flexibility, enhancing incentives, balancing costs and benefits, and placing maximum reliance on the private sector in a wide range of policy areas, including the forthcoming National Energy Strategy, global climate change, cable television, telecommunications, antitrust, product liability, medical malpractice, and the regulatory oversight process led by OMB and the Council on Competitiveness.

Dr. Schmalensee dealt with a wide range of environmental issues as a member of the Environmental Policy Review Group. He served on the Clean Air Strategy Group and participated in negotiations with the Senate leadership on the Clean Air Act. He was a member of the Global Change Strategy Group and the Task Force on Economic Costs. Dr. Schmalensee testified on energy and environmental matters before the Senate Committee on Energy and Natural Resources and its Subcommittee on Energy Research and Development. He served as Co-Chairman (with the Secretary of Energy) at a Department of Energy hearing on energy pricing in the forthcoming National Energy Strategy. Dr. Boskin co-chaired the White House Conference on Science and Economics Research Related to Global Change, and Dr. Schmalensee was a member of the U.S. delegation to the conference.

The Council also participated in various interagency working groups to develop policies to aid the disadvantaged without destroying incentives and job opportunities. Dr. Schmalensee was a member of the Low Income Opportunity Board and the Economic Empowerment Task Force.

PUBLIC INFORMATION

The Chairman and Council Members regularly testify before the Congress, make public speeches, and hold briefings for the press. In addition, the Council produces two publications a year for the public.

The *Economic Report of the President* is the principal medium through which the Council informs the public of its work and its views. It is an important vehicle for presenting the Administration's domestic and international economic policies. Annual distribution of the *Report* in recent years has averaged about 45,000 copies. The Council assumes primary responsibility for the monthly *Economic Indicators*, which is issued by the Joint Economic Committee of the Congress and has a distribution of approximately 10,000.

THE COUNCIL AND THE STAFF

The Chairman is responsible for communicating the Council's views on economic developments to the President through personal discussions and written reports. The Chairman also represents the Council at daily White House Senior Staff meetings; at budget review group meetings with the President; and at many other formal and informal meetings with the President and White House Senior Staff, as well as with other senior government officials. The Chairman guides the work of the Council and exercises ultimate responsibility for directing the work of the professional staff.

Members of the Council are responsible for the full range of issues within the Council's purview and for the direct supervision of the work of the professional staff. Members represent the Council at a wide variety of interagency and international meetings and assume major responsibility for selecting issues for Council attention.

The small size of the Council permits the Chairman and the Members to work as a team on most policy issues. There is, however, an informal division of subject matter. Dr. Schmalensee is primarily responsible for microeconomic and sectoral analysis, including analyses of regulatory issues and foreign economies undergoing market restructuring. Dr. Taylor is primarily responsible for international trade, financial markets, and macroeconomic analysis, including economic projections.

PROFESSIONAL STAFF

The Council's advice to the President depends on the analytical and empirical studies of its professional staff. The Council has benefited from an exceptionally capable staff during 1990. The professional staff currently consists of a Special Assistant to the Chairman and Senior Staff Economist, a Staff Assistant to the Chairman, a Senior Statistician, 11 Senior Staff Economists, 6 Junior Staff Economists, and a Research Assistant. The professional staff and their respective areas of concentration at the end of 1990 were:

Special Assistant to the Chairman and Senior Staff Economist

Harry G. Broadman	International Trade and Investment, R&D, and Regulation

Staff Assistant to the Chairman

Stefanie J. Reiser

Senior Staff Economists

Richard E. Baldwin	International Trade
Nicole S. Ballenger	Agriculture and International Trade
Howard K. Gruenspecht	Environment and Regulation
Michael W. Horrigan	Labor Markets and Quality of Statistics
Charles J. Jacklin	Financial Markets and Banking
Adam B. Jaffe	Regulation, Energy, and R&D
Robert B. Kahn	International Finance, Eastern Europe, and the Soviet Union
Peter F. Kostiuk	Labor Markets, Energy, and Health
Ralph M. Monaco	Macroeconomics and Forecasting
John Karl Scholz	Public Finance
James A. Wilcox	Monetary Policy and Macroeconomics

Senior Statistician

Catherine H. Furlong

Junior Staff Economists

Mark A. Condon	International Trade and Macroeconomics
Erik D. Craft	Banking, Public Finance, and Regulation
Alison F. Del Rossi	Labor Markets, Environment, and Regulation
Brian J. Hall	Monetary Policy, Public Finance, and Macroeconomics
Arik M. Levinson	Public Finance and Energy
Naomi S. Smith	International Trade and Finance, Eastern Europe, and the Soviet Union

Research Assistant

Derek H. Utter	Forecasting, Macroeconomics, and Energy

Philip J. Deutch (Stanford University) served as an intern during the fall of 1990. Andrew T. Levin (University of California, San Diego) served as a consultant during the fall of 1990. James G. Sununu (Stanford University) served as a Research Assistant during the summer of 1990. Omar N. Toulan, who served as a Research Assistant through the spring of 1990, accepted a position with McKinsey & Company, Inc.

Mrs. Furlong is assisted in the operation of the Statistical Office by Natalie V. Rentfro, Linda A. Reilly, and Margaret L. Snyder. The Statistical Office maintains and updates the Council's statistical information system and is responsible for overseeing the publication of the *Economic Indicators* and the statistical appendix to the *Economic Report of the President*, as well as for the verification of statistics in memoranda, testimony, and speeches.

Martha V. Gottron provided editorial assistance in the preparation of the 1991 *Report*.

SUPPORTING STAFF

The Administrative Office, which provides general support for the Council's activities, consists of Elizabeth A. Kaminski, Administrative Officer, and Catherine Fibich, Administrative Assistant.

The Secretaries for the Council during 1990 were Alice H. Williams and Sandra F. Daigle (Secretaries to the Chairman), Lisa D. Branch (Secretary to Dr. Taylor), and Francine P. Obermiller (Secretary to Dr. Schmalensee). The Secretaries for the Council's staff were Mary E. Jones, Rosalind V. Rasin, Mary A. Thomas, and Janet J. Twyman.

Lissa J. Rideout and David J. Kogut served as Student Assistants during the summer and winter of 1990. Dorothy Bagovich, Statistical Assistant, and Rebecca J. Hopkins, Student Assistant, assisted in the preparation of the 1991 *Report*.

DEPARTURES

J. Steven Landefeld, who served as Special Assistant to the Chairman, resigned in the summer of 1990 to accept a position with the Department of Commerce. Margot E. Machol, who served as Staff Assistant to the Chairman in the summer and fall of 1990, became a Member of the National Commission for Employment Policy.

The Council's Senior Staff Economists, in most cases, are on leave of absence from faculty positions at academic institutions or from other government agencies or research institutions. Their tenure with the Council is usually limited to one or two years. Most of the Senior Staff Economists who resigned during 1990 returned to their previous affiliations. They are John M. Antle (Montana State University), Randi M. Boorstein (International Trade

Commission), Susan M. Collins (Harvard University), Brian F. Madigan (Board of Governors of the Federal Reserve System), Marc S. Robinson (General Motors), and William L. Wascher (Board of Governors of the Federal Reserve System). Others went on to new positions. They are Jeremy C. Stein (Massachusetts Institute of Technology), Rebecca M. Blank (Northwestern University), Douglas J. Holtz-Eakin (Syracuse University), and Peter M. Taylor (Senate Budget Committee).

Staff Economists usually have just completed their dissertations and spend one year at the Council as additional preparation for their professional careers. Staff Economists in 1990 were S. Lael Brainard (Massachusetts Institute of Technology) and Barbara A. Claffey (Department of Agriculture). Junior Staff Economists generally are graduate students who spend one year with the Council and then return to school to complete their dissertations. Those who returned to their graduate studies in 1990 are: Janice C. Eberly (Massachusetts Institute of Technology), Elizabeth T. Powers (The Brookings Institution and the University of Pennsylvania), and David E. Weinstein (University of Michigan). Beth Anne Wilson, who served as a Research Assistant in 1990, began graduate studies at the Massachusetts Institute of Technology.

Suzanne M. Tudor, Secretary to Dr. Taylor, resigned in 1990.

Appendix B

STATISTICAL TABLES RELATING TO INCOME, EMPLOYMENT, AND PRODUCTION

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General Notes

Detail in these tables may not add to totals because of rounding.
Unless otherwise noted, all dollar figures are in current dollars.
Symbols used:

^{p} Preliminary.

——Not available (also, not applicable).

Data in these tables reflect revisions made by the source agencies from January 1990 through February 4, 1991.

NATIONAL INCOME OR EXPENDITURE

TABLE B–1.—*Gross national product, 1929–90*

[Billions of dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product	Personal consumption expenditures				Gross private domestic investment						
		Total	Durable goods	Nondurable goods	Services	Total	Fixed investment					Change in business inventories
							Total	Nonresidential			Residential	
								Total	Structures	Producers' durable equipment		
1929	103.9	77.3	9.2	37.7	30.4	16.7	14.9	11.0	5.5	5.5	4.0	1.7
1933	56.0	45.8	3.5	22.3	20.1	1.6	3.1	2.5	1.1	1.4	.6	−1.6
1939	91.3	67.0	6.7	35.1	25.2	9.5	9.1	6.1	2.2	3.9	3.0	.4
1940	100.4	71.0	7.8	37.0	26.2	13.4	11.2	7.7	2.6	5.2	3.5	2.2
1941	125.5	80.8	9.7	42.9	28.3	18.3	13.8	9.7	3.3	6.4	4.1	4.5
1942	159.0	88.6	6.9	50.8	31.0	10.3	8.5	6.3	2.2	4.1	2.2	1.8
1943	192.7	99.5	6.5	58.6	34.3	6.2	6.9	5.4	1.8	3.7	1.4	−.6
1944	211.4	108.2	6.7	64.3	37.2	7.7	8.7	7.4	2.4	5.0	1.4	−1.0
1945	213.4	119.6	8.0	71.9	39.7	11.3	12.3	10.6	3.3	7.3	1.7	−1.0
1946	212.4	143.9	15.8	82.7	45.4	31.5	25.1	17.3	7.4	9.9	7.8	6.4
1947	235.2	161.9	20.4	90.9	50.6	35.0	35.5	23.5	8.1	15.3	12.1	−.5
1948	261.6	174.9	22.9	96.6	55.5	47.1	42.4	26.8	9.5	17.3	15.6	4.7
1949	260.4	178.3	25.0	94.9	58.4	36.5	39.5	24.9	9.2	15.7	14.6	−3.1
1950	288.3	192.1	30.8	98.2	63.2	55.1	48.3	27.8	10.0	17.8	20.5	6.8
1951	333.4	208.1	29.9	109.2	69.0	60.5	50.2	31.8	11.9	19.9	18.4	10.2
1952	351.6	219.1	29.3	114.7	75.1	53.5	50.5	31.9	12.2	19.7	18.6	3.1
1953	371.6	232.6	32.7	117.8	82.1	54.9	54.5	35.1	13.6	21.5	19.4	.4
1954	372.5	239.8	32.1	119.7	88.0	54.1	55.7	34.7	13.9	20.8	21.1	−1.6
1955	405.9	257.9	38.9	124.7	94.3	69.7	64.0	39.0	15.2	23.9	25.0	5.7
1956	428.2	270.6	38.2	130.8	101.6	72.7	68.0	44.5	18.2	26.3	23.5	4.6
1957	451.0	285.3	39.7	137.1	108.5	71.1	69.7	47.5	18.9	28.6	22.2	1.4
1958	456.8	294.6	37.2	141.7	115.7	63.6	65.1	42.4	17.5	24.9	22.7	−1.5
1959	495.8	316.3	42.8	148.5	125.0	80.2	74.4	46.3	18.0	28.3	28.1	5.8
1960	515.3	330.7	43.5	153.2	134.0	78.2	75.1	48.8	19.2	29.7	26.3	3.1
1961	533.8	341.1	41.9	157.4	141.8	77.1	74.7	48.3	19.4	28.9	26.4	2.4
1962	574.6	361.9	47.0	163.8	151.1	87.6	81.5	52.5	20.5	32.1	29.0	6.1
1963	606.9	381.7	51.8	169.4	160.6	93.1	87.3	55.2	20.8	34.4	32.1	5.8
1964	649.8	409.3	56.8	179.7	172.8	99.6	94.2	61.4	22.7	38.7	32.8	5.4
1965	705.1	440.7	63.5	191.9	185.4	116.2	106.2	73.1	27.4	45.8	33.1	9.9
1966	772.0	477.3	68.5	208.5	200.3	128.6	114.4	83.5	30.5	53.0	30.9	14.2
1967	816.4	503.6	70.6	216.9	216.0	125.7	115.4	84.4	30.7	53.7	31.1	10.3
1968	892.7	552.5	81.0	235.0	236.4	137.0	129.1	91.4	32.9	58.5	37.7	7.9
1969	963.9	597.9	86.2	252.2	259.4	153.2	143.4	102.3	37.1	65.2	41.2	9.8
1970	1,015.5	640.0	85.7	270.3	284.0	148.8	145.7	105.2	39.2	66.1	40.5	3.1
1971	1,102.7	691.6	97.6	283.3	310.7	172.5	164.7	109.6	40.9	68.7	55.1	7.8
1972	1,212.8	757.6	111.2	305.1	341.3	202.0	191.5	123.0	44.5	78.5	68.6	10.5
1973	1,359.3	837.2	124.7	339.6	373.0	238.8	219.2	145.9	51.4	94.5	73.3	19.6
1974	1,472.8	916.5	123.8	380.9	411.9	240.8	225.4	160.6	57.0	103.6	64.8	15.4
1975	1,598.4	1,012.8	135.4	416.2	461.2	219.6	225.2	162.9	56.3	106.6	62.3	−5.6
1976	1,782.8	1,129.3	161.5	452.0	515.9	277.7	261.7	180.0	60.1	119.9	81.7	16.0
1977	1,990.5	1,257.2	184.5	490.4	582.3	344.1	322.8	214.2	66.7	147.4	108.6	21.3
1978	2,249.7	1,403.5	205.6	541.8	656.1	416.8	388.2	259.0	81.0	178.0	129.2	28.6
1979	2,508.2	1,566.8	219.0	613.2	734.6	454.8	441.9	302.8	99.5	203.3	139.1	13.0
1980	2,732.0	1,732.6	219.3	681.4	831.9	437.0	445.3	322.8	113.9	208.9	122.5	−8.3
1981	3,052.6	1,915.1	239.9	740.6	934.7	515.5	491.5	369.2	138.5	230.7	122.3	24.0
1982	3,166.0	2,050.7	252.7	771.0	1,027.0	447.3	471.8	366.7	143.3	223.4	105.1	−24.5
1983	3,405.7	2,234.5	289.1	816.7	1,128.7	502.3	509.4	356.9	124.0	232.8	152.5	−7.1
1984	3,772.2	2,430.5	335.5	867.3	1,227.6	664.8	597.1	416.0	141.1	274.9	181.1	67.7
1985	4,014.9	2,629.0	372.2	911.2	1,345.6	643.1	631.8	442.9	153.2	289.7	188.8	11.3
1986	4,231.6	2,797.4	406.0	942.0	1,449.5	659.4	652.5	435.2	139.0	296.2	217.3	6.9
1987	4,515.6	3,009.4	423.4	1,001.3	1,584.7	699.5	671.2	444.9	133.7	311.2	226.3	28.3
1988	4,873.7	3,238.2	457.5	1,060.0	1,720.7	747.1	720.8	488.4	139.9	348.4	232.5	26.2
1989	5,200.8	3,450.1	474.6	1,130.0	1,845.5	771.2	742.9	511.9	146.2	365.7	231.0	28.3
1990 ᵖ	5,463.0	3,658.1	481.6	1,194.2	1,982.3	745.0	747.2	524.3	147.2	377.2	222.9	−2.2
1982: IV	3,212.5	2,117.0	263.8	786.6	1,066.5	409.6	469.5	354.9	137.6	217.3	114.7	−59.9
1983: IV	3,545.8	2,315.8	310.0	837.9	1,167.9	579.8	548.8	383.9	127.4	256.5	164.9	31.0
1984: IV	3,851.8	2,493.4	346.7	879.6	1,267.1	661.8	616.8	435.0	146.6	288.4	181.8	45.0
1985: IV	4,107.9	2,700.4	373.2	932.7	1,394.5	654.1	646.8	451.3	155.9	295.5	195.5	7.2
1986: IV	4,297.3	2,868.5	422.0	952.1	1,494.4	648.8	660.9	435.8	133.7	302.2	225.1	−12.2
1987: IV	4,647.6	3,079.1	427.4	1,019.9	1,631.8	741.4	685.7	457.5	137.2	320.4	228.1	55.7
1988: I	4,735.8	3,147.7	448.9	1,029.8	1,668.9	729.2	700.8	473.1	135.5	337.6	227.7	28.3
II	4,831.4	3,204.3	453.7	1,049.1	1,701.5	746.0	723.8	491.3	140.8	350.5	232.6	22.2
III	4,917.9	3,268.2	454.2	1,073.2	1,740.7	765.6	727.4	493.8	142.2	351.6	233.6	38.2
IV	5,009.8	3,332.6	473.1	1,088.0	1,771.5	747.5	731.3	495.3	141.2	354.0	236.0	16.2
1989: I	5,101.3	3,371.7	466.4	1,106.7	1,798.6	769.7	743.1	506.5	146.5	360.0	236.6	26.6
II	5,174.0	3,425.9	473.6	1,127.1	1,825.1	776.7	744.0	511.4	144.2	367.2	232.7	32.7
III	5,238.6	3,484.3	487.1	1,137.3	1,859.8	775.8	746.9	518.1	147.0	371.0	228.9	28.9
IV	5,289.3	3,518.5	471.2	1,148.8	1,898.5	762.7	737.7	511.8	147.1	364.7	225.9	25.0
1990: I	5,375.4	3,588.1	492.1	1,174.7	1,921.3	747.2	758.9	523.1	148.8	374.3	235.9	−11.8
II	5,443.3	3,622.7	478.4	1,179.0	1,965.3	759.0	745.6	516.5	147.2	369.3	229.1	13.4
III	5,514.6	3,693.4	482.3	1,205.0	2,006.2	759.7	750.7	532.8	149.8	383.0	217.9	9.0
IV ᵖ	5,518.9	3,728.1	473.5	1,218.3	2,036.3	714.0	733.6	525.0	142.8	382.2	208.6	−19.5

See next page for continuation of table.

TABLE B-1.—*Gross national product, 1929–90*—Continued

[Billions of dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Net exports of goods and services			Government purchases of goods and services					Final sales	Gross domestic purchases [1]	Percent change from preceding period		
					Federal			State and local					
	Net exports	Exports	Imports	Total	Total	National defense	Nondefense				Gross national product	Final sales	Gross domestic purchases [1]
1929	1.1	7.1	5.9	8.9	1.5	....	....	7.4	102.2	102.8	....	....	....
1933	.4	2.4	2.1	8.3	2.2	....	....	6.1	57.6	55.7	−4.2	−5.5	−4.2
1939	1.2	4.6	3.4	13.6	5.2	1.3	3.9	8.3	90.9	90.1	7.0	5.4	7.3
1940	1.8	5.4	3.7	14.2	6.1	2.3	3.9	8.1	98.3	98.7	10.0	8.1	9.5
1941	1.5	6.1	4.7	25.0	17.0	13.8	3.2	8.0	121.0	124.1	25.0	23.2	25.7
1942	.2	5.0	4.8	59.9	52.0	49.4	2.6	7.8	157.2	158.8	26.6	29.9	28.0
1943	−1.9	4.6	6.5	88.9	81.4	79.8	1.6	7.5	193.4	194.6	21.2	23.0	22.6
1944	−1.7	5.5	7.2	97.1	89.4	87.5	2.0	7.6	212.3	213.0	9.7	9.8	9.5
1945	−.5	7.4	7.9	83.0	74.8	73.7	1.1	8.2	214.4	213.9	.9	1.0	.4
1946	7.8	15.2	7.3	29.1	19.2	16.4	2.8	9.9	206.0	204.5	−.5	−3.9	−4.4
1947	11.9	20.3	8.3	26.4	13.6	10.0	3.6	12.8	235.7	223.3	10.8	14.4	9.2
1948	7.0	17.5	10.6	32.6	17.3	11.3	6.0	15.3	256.9	254.7	11.2	9.0	14.0
1949	6.5	16.4	9.8	39.0	21.1	13.9	7.2	18.0	263.4	253.8	−.5	2.5	−.3
1950	2.2	14.5	12.3	38.8	19.1	14.3	4.7	19.8	281.4	286.0	10.7	6.8	12.7
1951	4.5	19.8	15.3	60.4	38.6	33.8	4.8	21.8	323.2	329.0	15.7	14.8	15.0
1952	3.2	19.2	16.0	75.8	52.7	46.2	6.5	23.1	348.6	348.4	5.5	7.9	5.9
1953	1.3	18.1	16.8	82.8	57.9	49.0	8.9	24.8	371.1	370.3	5.7	6.5	6.3
1954	2.6	18.8	16.3	76.0	48.4	41.6	6.8	27.7	374.1	370.0	.2	.8	−.1
1955	3.0	21.1	18.1	75.3	44.9	39.0	6.0	30.3	400.2	402.9	9.0	7.0	8.9
1956	5.3	25.2	19.9	79.7	46.4	40.7	5.7	33.3	423.6	422.9	5.5	5.8	5.0
1957	7.3	28.2	20.9	87.3	50.5	44.6	5.9	36.9	449.6	443.7	5.3	6.1	4.9
1958	3.3	24.4	21.1	95.4	54.5	46.3	8.3	40.8	458.3	453.5	1.3	1.9	2.2
1959	1.5	25.0	23.5	97.9	54.6	46.4	8.2	43.3	490.0	494.3	8.5	6.9	9.0
1960	5.9	29.9	24.0	100.6	54.4	45.3	9.2	46.1	512.3	509.4	3.9	4.6	3.1
1961	7.2	31.1	23.9	108.4	58.2	47.9	10.2	50.2	531.4	526.6	3.6	3.7	3.4
1962	6.9	33.1	26.2	118.2	64.6	52.1	12.6	53.5	568.5	567.7	7.6	7.0	7.8
1963	8.2	35.7	27.5	123.8	65.7	51.5	14.2	58.1	601.1	598.7	5.6	5.7	5.5
1964	10.9	40.5	29.6	130.0	66.4	50.4	16.0	63.5	644.4	638.9	7.1	7.2	6.7
1965	9.7	42.9	33.2	138.6	68.7	51.0	17.7	69.9	695.2	695.4	8.5	7.9	8.8
1966	7.5	46.6	39.1	158.6	80.4	62.0	18.3	78.2	757.8	764.5	9.5	9.0	9.9
1967	7.4	49.5	42.1	179.7	92.7	73.4	19.3	87.0	806.1	809.0	5.8	6.4	5.8
1968	5.5	54.8	49.3	197.7	100.1	79.1	21.0	97.6	884.8	887.2	9.3	9.8	9.7
1969	5.6	60.4	54.7	207.3	100.0	78.9	21.1	107.2	954.1	958.3	8.0	7.8	8.0
1970	8.5	68.9	60.5	218.2	98.8	76.8	22.0	119.4	1,012.3	1,007.0	5.4	6.1	5.1
1971	6.3	72.4	66.1	232.4	99.8	74.1	25.8	132.5	1,094.9	1,096.4	8.6	8.2	8.9
1972	3.2	81.4	78.2	250.0	105.8	77.4	28.4	144.2	1,202.3	1,209.6	10.0	9.8	10.3
1973	16.8	114.1	97.3	266.5	106.4	77.5	28.9	160.1	1,339.7	1,342.5	12.1	11.4	11.0
1974	16.3	151.5	135.2	299.1	116.2	82.6	33.6	182.9	1,457.4	1,456.5	8.3	8.8	8.5
1975	31.1	161.3	130.3	335.0	129.2	89.6	39.6	205.9	1,604.1	1,567.4	8.5	10.1	7.6
1976	18.8	177.7	158.9	356.9	136.3	93.4	42.9	220.6	1,766.8	1,764.0	11.5	10.1	12.5
1977	1.9	191.6	189.7	387.3	151.1	100.9	50.3	236.2	1,969.2	1,988.6	11.7	11.5	12.7
1978	4.1	227.5	223.4	425.2	161.8	108.9	52.9	263.4	2,221.0	2,245.6	13.0	12.8	12.9
1979	18.8	291.2	272.5	467.8	178.0	121.9	56.1	289.9	2,495.2	2,489.4	11.5	12.3	10.9
1980	32.1	351.0	318.9	530.3	208.1	142.7	65.4	322.2	2,740.3	2,699.8	8.9	9.8	8.5
1981	33.9	382.8	348.9	588.1	242.2	167.5	74.8	345.9	3,028.6	3,018.7	11.7	10.5	11.8
1982	26.3	361.9	335.6	641.7	272.7	193.8	78.9	369.0	3,190.5	3,139.7	3.7	5.3	4.0
1983	−6.1	352.5	358.7	675.0	283.5	214.4	69.1	391.5	3,412.8	3,411.8	7.6	7.0	8.7
1984	−58.9	383.5	442.4	735.9	310.5	234.3	76.2	425.3	3,704.5	3,831.1	10.8	8.5	12.3
1985	−78.0	370.9	448.9	820.8	355.2	259.1	96.0	465.6	4,003.6	4,092.8	6.4	8.1	6.8
1986	−97.4	396.5	493.8	872.2	366.5	277.8	88.7	505.7	4,224.8	4,329.0	5.4	5.5	5.8
1987	−114.7	449.6	564.3	921.4	381.3	294.6	86.7	540.2	4,487.3	4,630.3	6.7	6.2	7.0
1988	−74.1	552.0	626.1	962.5	380.3	297.2	83.1	582.3	4,847.5	4,947.8	7.9	8.0	6.9
1989	−46.1	626.2	672.3	1,025.6	400.0	301.1	98.9	625.6	5,172.5	5,246.9	6.7	6.7	6.0
1990 ^{p}	−38.0	670.4	708.4	1,098.0	424.2	314.0	110.2	673.8	5,465.3	5,501.1	5.0	5.7	4.8
1982: IV	14.1	335.9	321.9	671.8	293.2	205.4	87.7	378.7	3,272.4	3,198.5	4.2	11.0	4.3
1983: IV	−25.8	364.7	390.5	676.1	276.1	221.5	54.6	400.0	3,514.8	3,571.6	12.4	7.8	13.1
1984: IV	−67.9	385.7	453.6	764.5	326.0	244.1	81.9	438.5	3,806.8	3,919.7	4.7	7.0	5.5
1985: IV	−103.2	369.2	472.4	856.7	376.6	268.6	108.0	480.1	4,100.7	4,211.2	6.2	5.5	8.3
1986: IV	−108.9	402.4	511.3	888.9	368.8	280.7	88.1	520.1	4,309.4	4,406.2	4.2	4.7	4.9
1987: IV	−115.0	485.8	600.7	942.0	388.2	296.0	92.2	553.9	4,591.9	4,762.6	8.7	4.5	8.1
1988: I	−82.0	525.7	607.8	940.9	374.8	296.6	78.3	566.1	4,707.4	4,817.8	7.8	10.4	4.7
II	−74.3	540.4	614.7	955.4	377.7	297.1	80.6	577.7	4,809.2	4,905.7	8.3	8.9	7.5
III	−69.6	558.7	628.3	953.8	367.4	295.5	71.9	586.4	4,879.7	4,987.5	7.4	6.0	6.8
IV	−70.3	583.1	653.5	1,000.0	401.1	299.6	101.6	598.9	4,993.6	5,080.1	7.7	9.7	7.6
1989: I	−48.5	609.7	658.2	1,008.5	398.3	298.2	100.1	610.2	5,074.7	5,149.8	7.5	6.7	5.6
II	−51.3	628.8	680.0	1,022.7	402.5	300.6	101.9	620.2	5,141.3	5,225.3	5.8	5.4	6.0
III	−49.3	623.7	673.0	1,027.8	399.2	306.3	93.0	628.6	5,209.7	5,287.9	5.1	5.4	4.9
IV	−35.3	642.8	678.1	1,043.3	399.9	299.2	100.7	643.4	5,264.3	5,324.6	3.9	4.3	2.8
1990: I	−30.0	661.3	691.3	1,070.1	410.6	307.2	103.4	659.6	5,387.2	5,405.3	6.7	9.7	6.2
II	−24.9	659.7	684.6	1,086.4	421.9	309.6	112.3	664.6	5,429.9	5,468.2	5.1	3.2	4.7
III	−41.3	672.7	714.1	1,102.8	425.8	312.6	113.2	677.0	5,505.6	5,555.9	5.3	5.7	6.6
IV ^{p}	−55.9	687.7	743.7	1,132.7	438.5	326.5	112.0	694.2	5,538.4	5,574.8	.3	2.4	1.4

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[1] Gross national product (GNP) less exports of goods and services plus imports of goods and services.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–2.—*Gross national product in 1982 dollars, 1929–90*

[Billions of 1982 dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product	Personal consumption expenditures				Gross private domestic investment						
		Total	Durable goods	Nondurable goods	Services	Total	Fixed investment					Change in business inventories
							Total	Nonresidential			Residential	
								Total	Structures	Producers' durable equipment		
1929	709.6	471.4	40.3	211.4	219.7	139.2	128.4	93.0	54.7	38.4	35.4	10.8
1933	498.5	378.7	20.7	181.8	176.2	22.7	33.5	25.8	14.3	11.5	7.7	−10.7
1939	716.6	480.5	35.7	248.0	196.7	86.0	82.1	53.2	25.2	28.0	28.9	3.9
1940	772.9	502.6	40.6	259.4	202.7	111.8	97.4	65.0	28.5	36.5	32.5	14.4
1941	909.4	531.1	46.2	275.6	209.3	138.8	111.1	76.6	33.4	43.2	34.4	27.8
1942	1,080.3	527.6	31.3	279.1	217.2	76.7	64.7	47.4	20.9	26.5	17.3	12.0
1943	1,276.2	539.9	28.1	284.7	227.2	50.4	49.7	39.4	15.6	23.8	10.4	.7
1944	1,380.6	557.1	26.3	297.9	232.9	56.4	61.6	52.6	20.4	32.1	9.0	−5.2
1945	1,354.8	592.7	28.7	323.5	240.5	76.5	84.9	74.2	27.0	47.2	10.7	−8.4
1946	1,096.9	655.0	47.8	344.2	262.9	178.1	150.2	105.5	50.9	54.7	44.7	27.9
1947	1,066.7	666.6	56.5	337.4	272.6	177.9	178.9	121.7	47.5	74.2	57.2	−1.0
1948	1,108.7	681.8	61.7	338.7	281.4	208.2	196.0	127.4	50.5	76.9	68.6	12.3
1949	1,109.0	695.4	67.8	342.3	285.3	168.8	178.4	114.8	49.3	65.5	63.6	−9.7
1950	1,203.7	733.2	80.7	352.8	299.8	234.9	210.8	124.0	52.8	71.2	86.7	24.2
1951	1,328.2	748.7	74.7	362.9	311.1	235.2	204.3	131.7	56.5	75.2	72.6	30.8
1952	1,380.0	771.4	73.0	376.6	321.9	211.8	201.8	130.6	57.3	73.3	71.2	10.0
1953	1,435.3	802.5	80.2	388.2	334.1	216.6	213.8	140.1	62.3	77.7	73.8	2.8
1954	1,416.2	822.7	81.5	393.8	347.4	212.6	217.3	137.5	64.9	72.7	79.8	−4.8
1955	1,494.9	873.8	96.9	413.2	363.6	259.8	243.5	151.0	69.4	81.7	92.4	16.3
1956	1,525.6	899.8	92.8	426.9	380.1	257.8	244.9	160.4	75.5	84.9	84.4	12.9
1957	1,551.1	919.7	92.4	434.7	392.6	243.4	240.4	161.1	75.2	85.9	79.3	3.0
1958	1,539.2	932.9	86.9	439.9	406.1	221.4	224.8	143.9	70.6	73.3	81.0	−3.4
1959	1,629.1	979.4	96.9	455.8	426.7	270.3	253.8	153.6	71.9	81.7	100.2	16.5
1960	1,665.3	1,005.1	98.0	463.3	443.9	260.5	252.7	159.4	76.1	83.3	93.3	7.7
1961	1,708.7	1,025.2	93.6	470.1	461.4	259.1	251.8	158.2	77.7	80.5	93.6	7.3
1962	1,799.4	1,069.0	103.0	484.2	481.8	288.6	272.4	170.2	81.3	88.9	102.2	16.2
1963	1,873.3	1,108.4	111.8	494.3	502.3	307.1	290.5	176.6	81.6	95.1	113.9	16.6
1964	1,973.3	1,170.6	120.8	517.5	532.3	325.9	310.2	194.9	87.9	107.0	115.3	15.7
1965	2,087.6	1,236.4	134.6	543.2	558.5	367.0	341.8	227.6	101.8	125.8	114.2	25.2
1966	2,208.3	1,298.9	144.4	569.3	585.3	390.5	353.7	250.4	108.0	142.4	103.2	36.9
1967	2,271.4	1,337.7	146.2	579.2	612.3	374.4	345.6	245.0	105.4	139.6	100.6	28.8
1968	2,365.6	1,405.9	161.6	602.4	641.8	391.8	370.7	254.5	108.0	146.5	116.2	21.0
1969	2,423.3	1,456.7	167.8	617.2	671.7	410.3	385.1	269.7	112.9	156.8	115.4	25.1
1970	2,416.2	1,492.0	162.5	632.5	697.0	381.5	373.3	264.0	111.1	152.9	109.3	8.2
1971	2,484.8	1,538.8	178.3	640.3	720.2	419.3	399.7	258.4	107.3	151.0	141.3	19.6
1972	2,608.5	1,621.9	200.4	665.5	756.0	465.4	443.7	277.0	109.5	167.5	166.6	21.8
1973	2,744.1	1,689.6	220.3	683.2	786.1	520.8	480.8	317.3	117.7	199.6	163.4	40.0
1974	2,729.3	1,674.0	204.9	666.1	803.1	481.3	448.0	317.8	115.2	202.7	130.2	33.3
1975	2,695.0	1,711.9	205.6	676.5	829.8	383.3	396.1	281.2	102.8	178.4	114.9	−12.8
1976	2,826.7	1,803.9	232.3	708.8	862.8	453.5	431.4	290.6	104.4	186.2	140.8	22.1
1977	2,958.6	1,883.8	253.9	731.4	898.5	521.3	492.2	324.0	108.3	215.7	168.1	29.1
1978	3,115.2	1,961.0	267.4	753.7	939.8	576.9	540.2	362.1	119.3	242.8	178.0	36.8
1979	3,192.4	2,004.4	266.5	766.6	971.2	575.2	560.2	389.4	130.6	258.8	170.8	15.0
1980	3,187.1	2,000.4	245.9	762.6	991.9	509.3	516.2	379.2	136.2	243.0	137.0	−6.9
1981	3,248.8	2,024.2	250.8	764.4	1,009.0	545.5	521.7	395.2	148.8	246.4	126.5	23.9
1982	3,166.0	2,050.7	252.7	771.0	1,027.0	447.3	471.8	366.7	143.3	223.4	105.1	−24.5
1983	3,279.1	2,146.0	283.1	800.2	1,062.7	504.0	510.4	361.2	127.2	233.9	149.3	−6.4
1984	3,501.4	2,249.3	323.1	825.9	1,100.3	658.4	596.1	425.2	143.8	281.4	170.9	62.3
1985	3,618.7	2,354.8	355.1	847.4	1,152.3	637.0	627.9	453.5	149.5	304.0	174.4	9.1
1986	3,717.9	2,446.4	384.4	878.1	1,183.8	639.6	634.1	438.4	130.1	308.3	195.7	5.6
1987	3,845.3	2,515.8	391.4	892.7	1,231.6	669.0	646.2	449.8	122.8	327.0	196.4	22.8
1988	4,016.9	2,606.5	418.2	909.4	1,278.9	705.7	682.1	487.2	122.4	364.8	194.9	23.6
1989	4,117.7	2,656.8	428.0	919.9	1,309.0	716.9	693.1	506.1	122.4	383.7	187.0	23.8
1990 p	4,155.8	2,682,2	428.4	911.5	1,342.2	690.3	691.4	513.9	121.0	392.9	177.5	−1.1
1982: IV	3,159.3	2,078.7	262.0	778.6	1,038.1	408.8	468.1	352.3	138.3	214.1	115.8	−59.3
1983: IV	3,365.1	2,191.9	300.5	812.7	1,078.6	577.2	550.3	390.4	131.6	258.8	159.9	27.0
1984: IV	3,535.2	2,281.1	333.1	831.2	1,116.8	655.7	614.0	444.4	147.1	297.3	169.6	41.7
1985: IV	3,662.4	2,386.9	356.4	858.3	1,172.2	648.0	640.4	460.9	149.9	311.1	179.4	7.7
1986: IV	3,733.6	2,477.8	397.5	883.5	1,196.8	615.2	636.0	435.7	123.4	312.3	200.3	−20.8
1987: IV	3,920.7	2,534.2	392.6	895.2	1,246.4	706.6	658.1	462.3	124.4	337.9	195.8	48.4
1988: I	3,970.2	2,576.8	412.4	900.9	1,263.5	698.4	667.4	475.0	121.0	353.9	192.4	31.0
II	4,005.8	2,594.1	416.2	905.3	1,272.6	705.1	688.3	492.6	123.9	368.8	195.6	16.9
III	4,032.1	2,616.4	415.1	914.4	1,286.8	723.0	690.4	494.6	123.8	370.8	195.8	32.6
IV	4,059.3	2,638.8	429.0	917.1	1,292.8	696.2	682.2	486.6	121.0	365.6	195.6	14.0
1989: I	4,095.7	2,636.7	422.4	918.5	1,295.8	717.0	690.9	497.1	123.2	374.0	193.8	26.1
II	4,112.2	2,645.3	428.2	914.6	1,302.5	719.1	693.6	505.5	120.6	384.9	188.1	25.5
III	4,129.7	2,675.3	438.1	923.4	1,313.8	722.3	697.7	513.3	122.7	390.6	184.4	24.6
IV	4,133.2	2,669.9	423.1	923.0	1,323.8	709.1	690.2	508.4	123.1	385.4	181.8	18.9
1990: I	4,150.6	2,677.3	437.6	915.6	1,324.2	700.7	702.9	514.6	123.8	390.8	188.3	−2.2
II	4,155.1	2,678.8	426.8	911.2	1,340.8	700.7	691.2	508.4	120.9	387.5	182.8	9.5
III	4,170.0	2,696.8	429.5	916.4	1,350.8	697.0	692.3	519.3	122.4	397.0	173.0	4.7
IV p	4,147.6	2,675.8	419.9	902.8	1,353.1	662.8	679.1	513.2	117.0	396.3	165.9	−16.3

See next page for continuation of table.

TABLE B-2.—*Gross national product in 1982 dollars, 1929–90*—Continued

[Billions of 1982 dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Net exports of goods and services			Government purchases of goods and services					Final sales	Gross domestic purchases [1]	Percent change from preceding period		
					Federal								
	Net exports	Exports	Imports	Total	Total	National defense	Nondefense	State and local			Gross national product	Final sales	Gross domestic purchases [1]
1929	4.7	42.1	37.4	94.2	18.3	......	......	75.9	698.7	704.9	......	......	......
1933	−1.4	22.7	24.2	98.5	27.0	......	......	71.5	509.2	499.9	−2.1	−3.1	−1.9
1939	6.1	36.2	30.1	144.1	53.8	......	......	90.3	712.7	710.5	7.9	6.3	7.9
1940	8.2	40.0	31.7	150.2	63.6	......	......	86.6	758.5	764.6	7.8	6.4	7.6
1941	3.9	42.0	38.2	235.6	153.0	......	......	82.6	881.6	905.5	17.7	16.2	18.4
1942	−7.7	29.1	36.9	483.7	407.1	......	......	76.7	1,068.3	1,088.0	18.8	21.2	20.1
1943	−23.0	25.1	48.0	708.9	638.1	......	......	70.8	1,275.5	1,299.2	18.1	19.4	19.4
1944	−23.8	27.3	51.1	790.8	722.5	......	......	68.3	1,385.7	1,404.3	8.2	8.6	8.1
1945	−18.9	35.2	54.1	704.5	634.0	......	......	70.5	1,363.3	1,373.7	−1.9	−1.6	−2.2
1946	27.0	69.0	42.0	236.9	159.3	......	......	77.6	1,069.0	1,069.9	−19.0	−21.6	−22.1
1947	42.4	82.3	39.9	179.8	91.9	......	......	87.9	1,067.7	1,024.3	−2.8	−.1	−4.3
1948	19.2	66.2	47.1	199.5	106.1	......	......	93.4	1,096.4	1,089.5	3.9	2.7	6.4
1949	18.8	65.0	46.2	226.0	119.5	......	......	106.5	1,118.7	1,090.2	.0	2.0	.1
1950	4.7	59.2	54.6	230.8	116.7	......	......	114.2	1,179.5	1,199.0	8.5	5.4	10.0
1951	14.6	72.0	57.4	329.7	214.4	......	......	115.4	1,297.4	1,313.6	10.3	10.0	9.6
1952	6.9	70.1	63.3	389.9	272.7	......	......	117.3	1,370.0	1,373.1	3.9	5.6	4.5
1953	−2.7	66.9	69.7	419.0	295.9	......	......	123.1	1,432.5	1,438.0	4.0	4.6	4.7
1954	2.5	70.0	67.5	378.4	245.0	......	......	133.4	1,421.0	1,413.7	−1.3	−.8	−1.7
1955	.0	76.9	76.9	361.3	217.9	......	......	143.4	1,478.6	1,494.9	5.6	4.1	5.7
1956	4.3	87.9	83.6	363.7	215.4	......	......	148.3	1,512.7	1,521.3	2.1	2.3	1.8
1957	7.0	94.9	87.9	381.1	224.1	......	......	157.0	1,548.1	1,544.2	1.7	2.3	1.5
1958	−10.3	82.4	92.8	395.3	224.9	......	......	170.4	1,542.6	1,549.6	−.8	−.4	.4
1959	−18.2	83.7	101.9	397.7	221.5	......	......	176.2	1,612.6	1,647.3	5.8	4.5	6.3
1960	−4.0	98.4	102.4	403.7	220.6	......	......	183.1	1,657.5	1,669.3	2.2	2.8	1.3
1961	−2.7	100.7	103.3	427.1	232.9	......	......	194.2	1,701.4	1,711.3	2.6	2.6	2.5
1962	−7.5	106.9	114.4	449.4	249.3	......	......	200.1	1,783.3	1,807.0	5.3	4.8	5.6
1963	−1.9	114.7	116.6	459.8	247.8	......	......	212.0	1,856.7	1,875.3	4.1	4.1	3.8
1964	5.9	128.8	122.8	470.8	244.2	......	......	226.6	1,957.6	1,967.3	5.3	5.4	4.9
1965	−2.7	132.0	134.7	487.0	244.4	......	......	242.5	2,062.4	2,090.3	5.8	5.4	6.3
1966	−13.7	138.4	152.1	532.6	273.8	......	......	258.8	2,171.5	2,222.1	5.8	5.3	6.3
1967	−16.9	143.6	160.5	576.2	304.4	......	......	271.8	2,242.6	2,288.3	2.9	3.3	3.0
1968	−29.7	155.7	185.3	597.6	309.6	......	......	288.0	2,344.6	2,395.3	4.1	4.5	4.7
1969	−34.9	165.0	199.9	591.2	295.6	......	......	295.6	2,398.1	2,458.1	2.4	2.3	2.6
1970	−30.0	178.3	208.3	572.6	268.3	......	......	304.3	2,407.9	2,446.2	−.3	.4	−.5
1971	−39.8	179.2	218.9	566.5	250.6	......	......	315.9	2,465.2	2,524.6	2.8	2.4	3.2
1972	−49.4	195.2	244.6	570.7	246.0	185.3	60.7	324.7	2,586.8	2,658.0	5.0	4.9	5.3
1973	−31.5	242.3	273.8	565.3	230.0	171.0	59.1	335.3	2,704.1	2,775.7	5.2	4.5	4.4
1974	.8	269.1	268.4	573.2	226.4	163.3	63.1	346.8	2,696.0	2,728.5	−.5	−.3	−1.7
1975	18.9	259.7	240.8	580.9	226.3	161.1	65.2	354.6	2,707.8	2,676.1	−1.3	.4	−1.9
1976	−11.0	274.4	285.4	580.3	224.2	157.5	66.8	356.0	2,804.6	2,837.7	4.9	3.6	6.0
1977	−35.5	281.6	317.1	589.1	231.8	159.2	72.7	357.2	2,929.5	2,994.1	4.7	4.5	5.5
1978	−26.8	312.6	339.4	604.1	233.7	160.7	73.0	370.4	3,078.4	3,142.0	5.3	5.1	4.9
1979	3.6	356.8	353.2	609.1	236.2	164.3	71.9	373.0	3,177.4	3,188.8	2.5	3.2	1.5
1980	57.0	388.9	332.0	620.5	246.9	171.2	75.7	373.6	3,194.0	3,130.1	−.2	.5	−1.8
1981	49.4	392.7	343.4	629.7	259.6	180.3	79.3	370.1	3,225.0	3,199.4	1.9	1.0	2.2
1982	26.3	361.9	335.6	641.7	272.7	193.8	78.9	369.0	3,190.5	3,139.7	−2.5	−1.1	−1.9
1983	−19.9	348.1	368.1	649.0	275.1	206.9	68.2	373.9	3,285.5	3,299.1	3.6	3.0	5.1
1984	−84.0	371.8	455.8	677.7	290.8	218.5	72.3	387.0	3,439.1	3,585.4	6.8	4.7	8.7
1985	−104.3	367.2	471.4	731.2	326.0	237.2	88.8	405.2	3,609.6	3,723.0	3.4	5.0	3.8
1986	−129.7	397.1	526.9	761.6	334.1	252.1	82.0	427.5	3,712.4	3,847.6	2.7	2.8	3.3
1987	−118.5	451.8	570.3	779.1	339.6	265.1	74.5	439.5	3,822.5	3,963.8	3.4	3.0	3.0
1988	−75.9	534.7	610.6	780.5	328.1	260.7	67.5	452.4	3,993.2	4,092.8	4.5	4.5	3.3
1989	−54.1	593.3	647.4	798.1	334.9	256.3	78.7	463.2	4,094.0	4,171.8	2.5	2.5	1.9
1990 p	−37.5	630.3	667.8	820.8	344.0	259.1	84.9	476.8	4,156.9	4,193.3	.9	1.5	.5
1982: IV	11.7	336.0	324.3	660.1	289.5	201.4	88.2	370.6	3,218.6	3,147.6	.6	7.1	.6
1983: IV	−46.2	355.5	401.6	642.2	266.0	211.6	54.4	376.2	3,338.1	3,411.3	7.3	3.8	8.6
1984: IV	−94.8	376.6	471.4	693.2	300.5	225.3	75.2	392.7	3,493.5	3,630.0	1.7	4.0	2.7
1985: IV	−125.3	367.4	492.6	752.7	340.6	241.4	99.2	412.1	3,654.7	3,787.6	3.0	1.6	4.8
1986: IV	−135.4	406.5	541.9	776.0	342.4	255.8	86.6	433.6	3,754.4	3,869.0	2.3	3.9	1.5
1987: IV	−111.3	487.0	598.3	791.3	347.7	266.0	81.7	443.6	3,872.3	4,032.0	6.6	2.3	5.1
1988: I	−77.3	521.7	599.0	772.4	324.5	262.2	62.3	447.9	3,939.2	4,047.6	5.1	7.1	1.6
II	−72.2	527.3	599.5	778.7	327.3	261.3	66.0	451.4	3,988.9	4,077.9	3.6	5.1	3.0
III	−78.5	534.3	612.8	771.2	318.4	258.0	60.4	452.7	3,999.5	4,110.6	2.7	1.1	3.2
IV	−75.7	555.3	631.0	799.9	342.3	261.1	81.2	457.5	4,045.2	4,134.9	2.7	4.6	2.4
1989: I	−51.1	576.1	627.3	793.2	334.2	253.7	80.4	459.0	4,069.6	4,146.8	3.6	2.4	1.2
II	−53.3	593.2	646.5	801.0	339.9	255.7	84.2	461.1	4,086.6	4,165.4	1.6	1.7	1.8
III	−64.1	592.5	656.6	796.2	333.0	260.2	72.8	463.2	4,105.1	4,193.9	1.7	1.8	2.8
IV	−47.9	611.6	659.4	802.2	332.7	255.5	77.2	469.5	4,114.4	4,181.1	.3	.9	−1.2
1990: I	−35.4	628.1	663.5	807.9	333.0	254.4	78.6	475.0	4,152.8	4,185.9	1.7	3.8	.5
II	−44.6	620.1	664.7	820.2	345.9	256.5	89.4	474.3	4,145.6	4,199.7	.4	−.7	1.3
III	−46.5	630.5	677.0	822.7	346.0	258.2	87.8	476.7	4,165.3	4,216.5	1.4	1.9	1.6
IV p	−23.6	642.4	666.0	832.5	351.1	267.4	83.6	481.4	4,163.9	4,171.1	−2.1	−.1	−4.2

[1] GNP less exports of goods and services plus imports of goods and services.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-3.—*Implicit price deflators for gross national product, 1929–90*

[Index numbers, 1982=100, except as noted; quarterly data seasonally adjusted]

Year or quarter	Gross national product	Personal consumption expenditures				Gross private domestic investment [1]				
						Fixed investment				
							Nonresidential			
		Total	Durable goods	Nondurable goods	Services	Total	Total	Structures	Producers' durable equipment	Residential
1929	14.6	16.4	22.9	17.8	13.8	11.6	11.8	10.0	14.3	11.2
1933	11.2	12.1	16.8	12.2	11.4	9.4	9.8	7.6	12.5	8.1
1939	12.7	13.9	18.7	14.2	12.8	11.1	11.5	8.8	13.9	10.5
1940	13.0	14.1	19.2	14.3	12.9	11.5	11.9	9.0	14.2	10.9
1941	13.8	15.2	20.9	15.5	13.5	12.4	12.7	9.7	14.9	11.9
1942	14.7	16.8	22.0	18.2	14.3	13.2	13.3	10.7	15.3	12.8
1943	15.1	18.4	23.3	20.6	15.1	13.8	13.8	11.4	15.4	13.8
1944	15.3	19.4	25.4	21.6	16.0	14.2	14.0	11.6	15.6	14.9
1945	15.7	20.2	27.7	22.2	16.5	14.5	14.3	12.3	15.4	15.8
1946	19.4	22.0	33.0	24.0	17.3	16.7	16.4	14.5	18.2	17.5
1947	22.1	24.3	36.1	26.9	18.6	19.8	19.3	17.1	20.7	21.1
1948	23.6	25.7	37.1	28.5	19.7	21.7	21.0	18.9	22.5	22.8
1949	23.5	25.6	36.9	27.7	20.5	22.2	21.7	18.6	24.0	23.0
1950	23.9	26.2	38.1	27.8	21.1	22.9	22.4	18.8	25.0	23.7
1951	25.1	27.8	40.0	30.1	22.2	24.6	24.2	21.1	26.4	25.4
1952	25.5	28.4	40.1	30.5	23.3	25.0	24.4	21.3	26.9	26.1
1953	25.9	29.0	40.8	30.4	24.6	25.5	25.1	21.8	27.7	26.3
1954	26.3	29.1	39.4	30.4	25.3	25.6	25.2	21.4	28.6	26.4
1955	27.2	29.5	40.1	30.2	25.9	26.3	25.8	21.8	29.3	27.0
1956	28.1	30.1	41.2	30.6	26.7	27.8	27.7	24.1	31.0	27.9
1957	29.1	31.0	42.9	31.5	27.6	29.0	29.5	25.2	33.3	28.0
1958	29.7	31.6	42.8	32.2	28.5	28.9	29.5	24.8	34.0	28.0
1959	30.4	32.3	44.2	32.6	29.3	29.3	30.2	25.0	34.7	28.0
1960	30.9	32.9	44.4	33.1	30.2	29.7	30.6	25.2	35.6	28.2
1961	31.2	33.3	44.8	33.5	30.7	29.7	30.5	25.0	35.9	28.2
1962	31.9	33.9	45.7	33.8	31.4	29.9	30.9	25.2	36.1	28.3
1963	32.4	34.4	46.3	34.3	32.0	30.1	31.3	25.5	36.2	28.2
1964	32.9	35.0	47.0	34.7	32.5	30.4	31.5	25.9	36.2	28.5
1965	33.8	35.6	47.1	35.3	33.2	31.1	32.1	26.9	36.4	29.0
1966	35.0	36.7	47.5	36.6	34.2	32.4	33.3	28.2	37.2	29.9
1967	35.9	37.6	48.3	37.5	35.3	33.4	34.4	29.1	38.4	30.9
1968	37.7	39.3	50.1	39.0	36.8	34.8	35.9	30.4	39.9	32.5
1969	39.8	41.0	51.4	40.9	38.6	37.2	37.9	32.9	41.5	35.6
1970	42.0	42.9	52.7	42.7	40.7	39.0	39.9	35.2	43.2	37.0
1971	44.4	44.9	54.7	44.2	43.1	41.2	42.4	38.1	45.5	39.0
1972	46.5	46.7	55.5	45.8	45.1	43.2	44.4	40.6	46.8	41.2
1973	49.5	49.6	56.6	49.7	47.4	45.6	46.0	43.7	47.3	44.8
1974	54.0	54.8	60.4	57.2	51.3	50.3	50.5	49.5	51.1	49.8
1975	59.3	59.2	65.9	61.5	55.6	56.9	57.9	54.7	59.7	54.2
1976	63.1	62.6	69.5	63.8	59.8	60.7	61.9	57.6	64.4	58.0
1977	67.3	66.7	72.7	67.1	64.8	65.6	66.1	61.6	68.3	64.6
1978	72.2	71.6	76.9	71.9	69.8	71.9	71.5	67.9	73.3	72.6
1979	78.6	78.2	82.1	80.0	75.6	78.9	77.8	76.2	78.6	81.4
1980	85.7	86.6	89.2	89.4	83.9	86.3	85.1	83.6	86.0	89.4
1981	94.0	94.6	95.7	96.9	92.6	94.2	93.4	93.1	93.7	96.6
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	103.9	104.1	102.1	102.1	106.2	99.8	98.8	97.5	99.5	102.2
1984	107.7	108.1	103.8	105.0	111.6	100.2	97.9	98.2	97.7	106.0
1985	110.9	111.6	104.8	107.5	116.8	100.6	97.7	102.5	95.3	108.3
1986	113.8	114.3	105.6	107.3	122.4	102.9	99.3	106.9	96.1	111.1
1987	117.4	119.6	108.2	112.2	128.7	103.9	98.9	108.9	95.2	115.2
1988	121.3	124.2	109.4	116.6	134.5	105.7	100.2	114.3	95.5	119.3
1989	126.3	129.9	110.9	122.8	141.0	107.2	101.2	119.5	95.3	123.5
1990 p	131.5	136.4	112.4	131.0	147.7	108.1	102.0	121.6	96.0	125.6
1982: IV	101.7	101.8	100.7	101.0	102.7	100.3	100.7	99.5	101.5	99.1
1983: IV	105.4	105.7	103.1	103.1	108.3	99.7	98.3	96.8	99.1	103.1
1984: IV	109.0	109.3	104.1	105.8	113.5	100.5	97.9	99.6	97.0	107.2
1985: IV	112.2	113.1	104.7	108.7	119.0	101.0	97.9	104.0	95.0	109.0
1986: IV	115.1	115.8	106.2	107.8	124.9	103.9	100.0	108.3	96.8	112.4
1987: IV	118.5	121.5	108.9	113.9	130.9	104.2	99.0	110.2	94.8	116.5
1988: I	119.3	122.2	108.9	114.3	132.1	105.0	99.6	111.9	95.4	118.4
II	120.6	123.5	109.0	115.9	133.7	105.2	99.7	113.7	95.0	118.9
III	122.0	124.9	109.4	117.4	135.3	105.4	99.8	114.8	94.8	119.3
IV	123.4	126.3	110.3	118.6	137.0	107.2	101.8	116.7	96.8	120.6
1989: I	124.6	127.9	110.4	120.5	138.8	107.6	101.9	118.9	96.3	122.1
II	125.8	129.5	110.6	123.2	140.1	107.3	101.2	119.5	95.4	123.7
III	126.8	130.2	111.2	123.2	141.6	107.1	100.9	119.8	95.0	124.2
IV	128.0	131.8	111.4	124.5	143.4	106.9	100.7	119.5	94.6	124.3
1990: I	129.5	134.0	112.5	128.3	145.1	108.0	101.6	120.2	95.8	125.3
II	131.0	135.2	112.1	129.4	146.6	107.9	101.6	121.8	95.3	125.3
III	132.2	137.0	112.3	131.5	148.5	108.4	102.6	122.4	96.5	126.0
IV p	133.1	139.3	112.7	134.9	150.5	108.0	102.3	122.1	96.4	125.7

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[1] Separate deflators are not calculated for gross private domestic investment, change in business inventories, and net exports of goods and services.

See next page for continuation of table.

Table B–3.—*Implicit price deflators for gross national product, 1929–90*—Continued

[Index numbers, 1982=100, except as noted; quarterly data seasonally adjusted]

Year or quarter	Exports and imports of goods and services [1]		Government purchases of goods and services					Final sales	Gross domestic purchases [2]	Percent change from preceding period, GNP implicit price deflator [3]
			Total	Federal			State and local			
	Exports	Imports		Total	National defense	Non-defense				
1929	16.8	15.9	9.4	8.1	......	......	9.7	14.6	14.6	......
1933	10.7	8.6	8.4	8.0	......	......	8.6	11.3	11.1	−2.2
1939	12.7	11.3	9.4	9.7	......	......	9.2	12.8	12.7	−.8
1940	13.6	11.6	9.5	9.7	......	......	9.3	13.0	12.9	2.0
1941	14.6	12.3	10.6	11.1	......	......	9.7	13.7	13.7	6.2
1942	17.2	13.1	12.4	12.8	......	......	10.2	14.7	14.6	6.6
1943	18.5	13.6	12.5	12.8	......	......	10.6	15.2	15.0	2.6
1944	20.2	14.1	12.3	12.4	......	......	11.2	15.3	15.2	1.4
1945	21.1	14.6	11.8	11.8	......	......	11.6	15.7	15.6	2.9
1946	22.0	17.4	12.3	12.0	......	......	12.8	19.3	19.1	22.9
1947	24.6	20.9	14.7	14.8	......	......	14.5	22.1	21.8	13.9
1948	26.5	22.4	16.3	16.3	......	......	16.3	23.4	23.4	7.0
1949	25.2	21.2	17.3	17.6	......	......	16.9	23.5	23.3	−.5
1950	24.4	22.5	16.8	16.3	......	......	17.3	23.9	23.9	2.0
1951	27.4	26.7	18.3	18.0	......	......	18.9	24.9	25.0	4.8
1952	27.4	25.3	19.4	19.3	......	......	19.7	25.4	25.4	1.5
1953	27.0	24.1	19.8	19.6	......	......	20.2	25.9	25.8	1.6
1954	26.9	24.1	20.1	19.7	......	......	20.7	26.3	26.2	1.6
1955	27.5	23.5	20.8	20.6	......	......	21.2	27.1	27.0	3.2
1956	28.6	23.8	21.9	21.5	......	......	22.4	28.0	27.8	3.4
1957	29.7	23.8	22.9	22.5	......	......	23.5	29.0	28.7	3.6
1958	29.6	22.7	24.1	24.2	......	......	24.0	29.7	29.3	2.1
1959	29.9	23.1	24.6	24.6	......	......	24.6	30.4	30.0	2.4
1960	30.4	23.4	24.9	24.7	......	......	25.2	30.9	30.5	1.6
1961	30.9	23.1	25.4	25.0	......	......	25.9	31.2	30.8	1.0
1962	31.0	22.9	26.3	25.9	......	......	26.7	31.9	31.4	2.2
1963	31.1	23.6	26.9	26.5	......	......	27.4	32.4	31.9	1.6
1964	31.4	24.1	27.6	27.2	......	......	28.0	32.9	32.5	1.5
1965	32.5	24.7	28.5	28.1	......	......	28.8	33.7	33.3	2.7
1966	33.7	25.7	29.8	29.4	......	......	30.2	34.9	34.4	3.6
1967	34.5	26.2	31.2	30.5	......	......	32.0	35.9	35.4	2.6
1968	35.2	26.6	33.1	32.3	......	......	33.9	37.7	37.0	5.0
1969	36.6	27.4	35.1	33.8	......	......	36.3	39.8	39.0	5.6
1970	38.7	29.0	38.1	36.8	......	......	39.2	42.0	41.2	5.5
1971	40.4	30.2	41.0	39.8	......	......	41.9	44.4	43.4	5.7
1972	41.7	32.0	43.8	43.0	41.8	46.8	44.4	46.5	45.5	4.7
1973	47.1	35.5	47.1	46.2	45.3	48.9	47.8	49.5	48.4	6.5
1974	56.3	50.4	52.2	51.3	50.6	53.3	52.8	54.1	53.4	9.1
1975	62.1	54.1	57.7	57.1	55.6	60.6	58.1	59.2	58.6	9.8
1976	64.8	55.7	61.5	60.8	59.3	64.3	62.0	63.0	62.2	6.4
1977	68.0	59.8	65.8	65.2	63.4	69.1	66.1	67.2	66.4	6.7
1978	72.8	65.8	70.4	69.2	67.8	72.4	71.1	72.1	71.5	7.3
1979	81.6	77.1	76.8	75.4	74.2	78.0	77.7	78.5	78.1	8.9
1980	90.2	96.0	85.5	84.3	83.4	86.4	86.2	85.8	86.3	9.0
1981	97.5	101.6	93.4	93.3	92.9	94.3	93.4	93.9	94.4	9.7
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	6.4
1983	101.3	97.4	104.0	103.1	103.6	101.4	104.7	103.9	103.4	3.9
1984	103.2	97.1	108.6	106.8	107.2	105.5	109.9	107.7	106.9	3.7
1985	101.0	95.2	112.3	109.0	109.2	108.2	114.9	110.9	109.9	3.0
1986	99.8	93.7	114.5	109.7	110.2	108.1	118.3	113.8	112.5	2.6
1987	99.5	99.0	118.3	112.3	111.1	116.3	122.9	117.4	116.8	3.2
1988	103.2	102.5	123.3	115.9	114.0	123.2	128.7	121.4	120.9	3.3
1989	105.5	103.8	128.5	119.4	117.5	125.8	135.1	126.3	125.8	4.1
1990 ᵖ	106.4	106.1	133.8	123.3	121.2	129.9	141.3	131.5	131.2	4.1
1982: IV	100.0	99.3	101.8	101.3	102.0	99.5	102.2	101.7	101.6	3.6
1983: IV	102.6	97.2	105.3	103.8	104.7	100.3	106.3	105.3	104.7	4.7
1984: IV	102.4	96.2	110.3	108.5	108.3	108.9	111.7	109.0	108.0	3.0
1985: IV	100.5	95.9	113.8	110.6	111.3	108.8	116.5	112.2	111.2	3.3
1986: IV	99.0	94.4	114.5	107.7	109.7	101.7	120.0	114.8	113.9	1.8
1987: IV	99.7	100.4	119.1	111.7	111.3	112.8	124.9	118.6	118.1	1.7
1988: I	100.8	101.5	121.8	115.5	113.1	125.7	126.4	119.5	119.0	2.7
II	102.5	102.5	122.7	115.4	113.7	122.0	128.0	120.6	120.3	4.4
III	104.6	102.5	123.7	115.4	114.5	119.1	129.5	122.0	121.3	4.7
IV	105.0	103.6	125.0	117.2	114.7	125.1	130.9	123.4	122.9	4.7
1989: I	105.8	104.9	127.1	119.2	117.5	124.4	132.9	124.7	124.2	3.9
II	106.0	105.2	127.7	118.4	117.6	121.0	134.5	125.8	125.4	3.9
III	105.3	102.5	129.1	119.9	117.7	127.8	135.7	126.9	126.1	3.2
IV	105.1	102.8	130.1	120.2	117.1	130.4	137.1	127.9	127.3	3.8
1990: I	105.3	104.2	132.5	123.3	120.8	131.5	138.9	129.7	129.1	4.8
II	106.4	103.0	132.5	122.0	120.7	125.6	140.1	131.0	130.2	4.7
III	106.7	105.5	134.0	123.0	121.1	128.9	142.0	132.2	131.8	3.7
IV ᵖ	107.1	111.7	136.1	124.9	122.1	133.9	144.2	133.0	133.7	2.8

[2] GNP less exports of goods and services plus imports of goods and services.

[3] Quarterly changes are at annual rates.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–4.—*Fixed-weighted price indexes for gross national product, 1982 weights, 1959–90*

[Index numbers, 1982=100, except as noted; quarterly data seasonally adjusted]

Year or quarter	Gross national product	Personal consumption expenditures	Gross private domestic investment[1]			Exports and imports of goods and services[1]		Government purchases of goods and services					Percent change from preceding period, GNP fixed-weighted price index[2]
			Fixed investment			Exports	Imports	Total	Federal			State and local	
			Total	Nonresidential	Residential				Total	National defense	Nondefense		
1959	37.6	35.2	58.0	65.9	30.2	32.8	27.0	25.8	26.9	...	...	24.9	...
1960	38.1	35.7	58.1	66.1	30.3	33.5	27.3	26.4	27.3	...	...	25.7	1.4
1961	38.4	36.1	58.0	66.0	30.2	34.0	27.0	27.0	27.8	...	...	26.4	.7
1962	38.7	36.4	58.0	66.1	29.9	34.1	26.7	27.8	28.4	...	...	27.3	.8
1963	39.1	36.8	58.0	66.2	29.5	34.4	27.1	28.5	29.3	...	...	27.9	1.0
1964	39.6	37.2	58.2	66.4	29.6	34.8	27.7	29.3	30.1	...	...	28.5	1.2
1965	40.1	37.7	58.5	66.7	30.0	35.9	28.1	30.0	30.8	...	...	29.3	1.4
1966	41.1	38.5	59.3	67.4	30.8	37.1	29.1	31.3	32.0	...	...	30.6	2.5
1967	42.1	39.5	60.2	68.4	31.6	38.2	29.5	32.7	32.8	...	...	32.5	2.6
1968	43.7	41.0	61.4	69.5	33.1	39.3	30.1	34.5	34.5	...	...	34.4	3.7
1969	45.6	42.8	63.2	71.0	36.0	40.9	31.2	36.6	36.4	...	...	36.7	4.4
1970	47.2	44.7	61.5	68.4	37.4	43.3	33.4	39.6	39.5	...	...	39.6	3.6
1971	48.8	46.6	60.6	66.6	39.5	45.3	35.6	42.3	42.4	...	...	42.2	3.5
1972	50.3	48.3	59.8	65.0	41.6	46.5	37.8	45.2	46.0	44.3	50.5	44.6	2.9
1973	53.1	51.0	61.8	66.6	45.1	50.8	42.4	48.8	50.1	47.4	56.9	47.8	5.5
1974	57.2	55.8	64.4	68.5	50.1	59.8	54.5	53.5	54.8	51.4	63.3	52.6	7.8
1975	61.8	60.1	69.0	73.1	54.6	65.4	59.7	58.6	59.4	56.5	66.6	57.9	8.0
1976	65.1	63.5	71.4	75.2	58.4	67.4	61.3	62.2	62.4	59.7	69.0	62.0	5.3
1977	68.4	67.5	72.6	74.9	64.8	70.3	66.1	66.0	65.8	63.5	71.5	66.2	5.1
1978	72.7	72.2	74.5	75.0	72.5	74.5	71.3	70.9	70.6	68.6	75.5	71.2	6.2
1979	78.8	78.6	80.3	80.1	81.2	82.9	80.9	77.3	76.8	75.1	81.0	77.7	8.5
1980	86.1	86.8	86.9	86.1	89.4	90.5	96.3	86.3	86.4	84.7	90.6	86.2	9.3
1981	94.1	94.6	94.5	93.9	96.6	97.7	101.5	94.1	94.9	93.8	97.4	93.5	9.3
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	6.2
1983	104.1	104.2	100.4	99.9	102.2	101.6	97.7	104.5	104.1	103.7	105.1	104.8	4.1
1984	108.3	108.4	101.5	100.2	106.0	104.3	97.5	109.2	108.0	107.6	108.9	110.1	4.0
1985	111.9	112.2	103.3	101.9	108.3	103.7	95.7	113.2	110.4	110.5	110.0	115.3	3.4
1986	114.9	115.3	105.7	104.2	110.9	103.6	94.0	115.5	110.6	111.1	109.4	119.2	2.7
1987	118.9	120.6	107.4	105.2	115.0	105.7	100.6	119.3	112.9	113.5	111.6	124.0	3.5
1988	123.9	125.6	111.2	109.0	119.1	111.3	105.8	124.7	117.4	117.4	117.6	130.1	4.2
1989	129.5	131.6	115.0	112.6	123.3	114.4	109.5	130.6	122.4	121.8	123.9	136.7	4.5
1990 p	135.3	138.4	118.1	116.0	125.5	117.2	114.1	136.5	127.3	127.1	127.6	143.3	4.5
1982: IV	101.7	101.8	100.2	100.5	99.1	100.0	99.3	102.0	101.7	101.8	101.4	102.2	4.0
1983: IV	105.7	105.8	100.5	99.6	103.3	103.2	97.6	106.0	105.4	104.7	107.0	106.4	4.0
1984: IV	109.6	109.7	102.3	100.9	107.2	104.0	96.8	110.7	109.0	109.0	109.1	111.9	3.2
1985: IV	113.2	113.8	104.2	102.8	109.0	103.4	96.8	114.4	111.0	111.4	110.1	117.0	3.3
1986: IV	116.1	116.7	106.4	104.8	112.1	103.5	94.7	116.6	110.7	111.6	108.7	121.0	3.1
1987: IV	120.5	122.6	108.2	105.9	116.3	106.7	102.9	120.9	113.8	114.3	112.8	126.0	3.7
1988: I	121.6	123.3	109.7	107.4	118.0	108.4	104.1	122.6	115.8	116.1	114.9	127.7	3.9
II	123.0	124.8	110.9	108.6	118.7	110.3	105.9	124.1	116.9	117.2	116.2	129.4	4.7
III	124.7	126.3	111.6	109.4	119.1	112.9	106.1	125.5	118.2	117.8	119.2	131.0	5.5
IV	126.1	127.9	112.7	110.6	120.4	113.5	107.2	126.7	118.8	118.4	120.0	132.5	4.4
1989: I	127.6	129.5	113.9	111.7	121.8	113.9	109.1	129.1	121.9	121.3	123.2	134.5	4.9
II	129.0	131.3	114.8	112.3	123.5	114.5	110.5	130.2	122.2	121.8	123.4	136.1	4.6
III	130.0	132.1	115.3	112.9	123.9	114.5	108.8	131.0	122.5	121.8	124.1	137.3	3.1
IV	131.2	133.7	116.1	113.8	124.1	114.4	109.9	132.1	123.0	122.3	124.9	138.9	3.8
1990: I	133.3	136.1	117.3	115.0	125.1	115.9	112.3	134.4	125.8	125.6	126.6	140.8	6.6
II	134.6	137.1	117.6	115.5	125.2	116.7	110.0	135.5	126.5	126.0	127.6	142.1	3.9
III	136.0	139.1	118.4	116.2	126.0	117.6	113.6	137.0	127.5	127.2	128.0	144.0	4.2
IV p	137.4	141.4	119.2	117.3	125.8	118.2	120.9	139.1	129.3	129.6	128.5	146.3	4.1

[1] Separate price indexes are not calculated for gross private domestic investment, change in business inventories, and net exports of goods and services.

[2] Quarterly changes are at annual rates.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–5.—*Changes in gross national product, personal consumption expenditures, and related price measures, 1933–90*

[Percent change from preceding period; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product					Personal consumption expenditures				
	Current dollars	Constant (1982) dollars	Implicit price deflator	Chain price index	Fixed-weighted price index (1982 weights)	Current dollars	Constant (1982) dollars	Implicit price deflator	Chain price index	Fixed-weighted price index (1982 weights)
1933	−4.2	−2.1	−2.2	....	....	−5.7	−1.6	−4.2	....	....
1939	7.0	7.9	−.8	....	....	4.6	5.1	−.5	....	....
1940	10.0	7.8	2.0	....	....	6.0	4.6	1.3	....	....
1941	25.0	17.7	6.2	....	....	13.8	5.7	7.7	....	....
1942	26.6	18.8	6.6	....	....	9.7	−.7	10.4	....	....
1943	21.2	18.1	2.6	....	....	12.2	2.3	9.6	....	....
1944	9.7	8.2	1.4	....	....	8.8	3.2	5.4	....	....
1945	.9	−1.9	2.9	....	....	10.5	6.4	3.9	....	....
1946	−.5	−19.0	22.9	....	....	20.4	10.5	8.9	....	....
1947	10.8	−2.8	13.9	....	....	12.5	1.8	10.6	....	....
1948	11.2	3.9	7.0	....	....	8.0	2.3	5.6	....	....
1949	−.5	.0	−.5	....	....	1.9	2.0	−.1	....	....
1950	10.7	8.5	2.0	....	....	7.7	5.4	2.2	....	....
1951	15.7	10.3	4.8	....	....	8.3	2.1	6.1	....	....
1952	5.5	3.9	1.5	....	....	5.3	3.0	2.2	....	....
1953	5.7	4.0	1.6	....	....	6.2	4.0	2.1	....	....
1954	.2	−1.3	1.6	....	....	3.1	2.5	.6	....	....
1955	9.0	5.6	3.2	....	....	7.5	6.2	1.3	....	....
1956	5.5	2.1	3.4	....	....	4.9	3.0	1.9	....	....
1957	5.3	1.7	3.6	....	....	5.4	2.2	3.2	....	....
1958	1.3	−.8	2.1	....	....	3.3	1.4	1.8	....	....
1959	8.5	5.8	2.4	....	....	7.4	5.0	2.2	....	....
1960	3.9	2.2	1.6	1.5	1.4	4.6	2.6	1.9	1.7	1.5
1961	3.6	2.6	1.0	1.0	.7	3.1	2.0	1.2	1.1	.9
1962	7.6	5.3	2.2	1.2	.8	6.1	4.3	1.8	1.1	.9
1963	5.6	4.1	1.6	1.3	1.0	5.5	3.7	1.5	1.4	1.1
1964	7.1	5.3	1.5	1.5	1.2	7.2	5.6	1.7	1.2	1.2
1965	8.5	5.8	2.7	1.8	1.4	7.7	5.6	1.7	1.5	1.2
1966	9.5	5.8	3.6	3.0	2.5	8.3	5.1	3.1	2.7	2.2
1967	5.8	2.9	2.6	2.8	2.6	5.5	3.0	2.5	2.5	2.5
1968	9.3	4.1	5.0	4.3	3.7	9.7	5.1	4.5	4.0	3.8
1969	8.0	2.4	5.6	5.0	4.4	8.2	3.6	4.3	4.4	4.3
1970	5.4	−.3	5.5	5.2	3.6	7.0	2.4	4.6	4.7	4.6
1971	8.6	2.8	5.7	4.8	3.5	8.1	3.1	4.7	4.3	4.2
1972	10.0	5.0	4.7	4.2	2.9	9.5	5.4	4.0	3.6	3.5
1973	12.1	5.2	6.5	5.9	5.5	10.5	4.2	6.2	6.0	5.7
1974	8.3	−.5	9.1	8.9	7.8	9.5	−.9	10.5	10.3	9.4
1975	8.5	−1.3	9.8	9.2	8.0	10.5	2.3	8.0	8.0	7.7
1976	11.5	4.9	6.4	5.9	5.3	11.5	5.4	5.7	5.7	5.6
1977	11.7	4.7	6.7	6.1	5.1	11.3	4.4	6.5	6.4	6.3
1978	13.0	5.3	7.3	7.2	6.2	11.6	4.1	7.3	7.2	7.0
1979	11.5	2.5	8.9	8.7	8.5	11.6	2.2	9.2	9.2	8.8
1980	8.9	−.2	9.0	9.0	9.3	10.6	−.2	10.7	10.9	10.5
1981	11.7	1.9	9.7	9.4	9.3	10.5	1.2	9.2	9.2	9.0
1982	3.7	−2.5	6.4	6.3	6.2	7.1	1.3	5.7	5.7	5.6
1983	7.6	3.6	3.9	4.1	4.1	9.0	4.6	4.1	4.2	4.2
1984	10.8	6.8	3.7	3.9	4.0	8.8	4.8	3.8	3.9	4.0
1985	6.4	3.4	3.0	3.3	3.4	8.2	4.7	3.2	3.5	3.5
1986	5.4	2.7	2.6	2.5	2.7	6.4	3.9	2.4	2.7	2.7
1987	6.7	3.4	3.2	3.3	3.5	7.6	2.8	4.6	4.6	4.6
1988	7.9	4.5	3.3	3.7	4.2	7.6	3.6	3.8	4.0	4.1
1989	6.7	2.5	4.1	4.3	4.5	6.5	1.9	4.6	4.7	4.8
1990 ᵖ	5.0	.9	4.1	4.2	4.5	6.0	1.0	5.0	4.9	5.2
1986: I	7.3	6.6	.7	1.7	2.2	5.1	4.1	1.1	1.6	1.6
II	1.3	−1.8	2.9	1.7	2.1	4.0	3.6	.4	.6	.5
III	5.7	.8	5.0	3.1	2.9	9.8	5.4	4.3	4.4	4.2
IV	4.2	2.3	1.8	2.7	3.1	6.2	2.2	3.9	3.9	3.9
1987: I	9.1	5.2	3.5	4.3	4.4	7.3	.7	6.4	6.2	6.3
II	7.5	4.2	3.1	3.1	3.5	9.6	4.5	4.8	4.9	5.1
III	7.4	4.1	3.5	3.3	3.5	8.9	4.3	4.4	4.3	4.3
IV	8.7	6.6	1.7	3.1	3.7	3.7	−.4	4.1	4.0	4.3
1988: I	7.8	5.1	2.7	3.3	3.9	9.2	6.9	2.3	2.5	2.6
II	8.3	3.6	4.4	4.2	4.7	7.4	2.7	4.3	4.7	4.8
III	7.4	2.7	4.7	4.8	5.5	8.2	3.5	4.6	4.8	5.1
IV	7.7	2.7	4.7	4.4	4.4	8.1	3.5	4.6	4.8	4.9
1989: I	7.5	3.6	3.9	4.7	4.9	4.8	−.3	5.2	5.0	5.0
II	5.8	1.6	3.9	4.4	4.6	6.6	1.3	5.1	5.3	5.7
III	5.1	1.7	3.2	3.1	3.1	7.0	4.6	2.2	2.6	2.7
IV	3.9	.3	3.8	3.7	3.8	4.0	−.8	5.0	4.9	4.7
1990: I	6.7	1.7	4.8	6.1	6.6	8.2	1.1	6.8	6.8	7.4
II	5.1	.4	4.7	4.1	3.9	3.9	.2	3.6	3.4	3.1
III	5.3	1.4	3.7	3.7	4.2	8.0	2.7	5.4	5.2	5.7
IV ᵖ	.3	−2.1	2.8	3.0	4.1	3.8	−3.1	6.9	6.5	7.1

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–6.—*Gross national product by major type of product, 1929–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product	Final sales	Inventory change	Goods							Services	Structures	Auto output
				Total			Durable goods		Nondurable goods				
				Total	Final sales	Inventory change	Final sales	Inventory change	Final sales	Inventory change			
1929	103.9	102.2	1.7	56.1	54.4	1.7	16.1	1.4	38.3	0.3	35.9	11.9	....
1933	56.0	57.6	−1.6	27.0	28.6	−1.6	5.4	−.5	23.2	−1.1	25.9	3.1	....
1939	91.3	90.9	.4	49.0	48.6	.4	12.4	.3	36.2	.1	34.5	7.8	....
1940	100.4	98.3	2.2	56.0	53.8	2.2	15.4	1.2	38.4	1.0	35.8	8.6	....
1941	125.5	121.0	4.5	72.5	68.0	4.5	23.8	3.1	44.2	1.4	40.9	12.1	....
1942	159.0	157.2	1.8	93.7	91.9	1.8	34.5	1.0	57.4	.7	50.9	14.4	....
1943	192.7	193.4	−.6	120.4	121.0	−.6	54.2	.0	66.8	−.6	63.2	9.2	....
1944	211.4	212.3	−1.0	132.3	133.3	−1.0	58.5	−.6	74.8	−.3	72.4	6.6	....
1945	213.4	214.4	−1.0	128.9	129.9	−1.0	50.1	−1.3	79.8	.2	77.3	7.2	....
1946	212.4	206.0	6.4	125.3	118.9	6.4	31.8	5.3	87.1	1.1	70.5	16.6	....
1947	235.2	235.7	−.5	139.8	140.3	−.5	44.4	1.4	95.9	−1.9	72.7	22.8	7.2
1948	261.6	256.9	4.7	154.4	149.7	4.7	48.0	1.0	101.7	3.7	78.0	29.2	8.8
1949	260.4	263.4	−3.1	147.7	150.8	−3.1	50.0	−1.8	100.9	−1.3	83.0	29.6	11.9
1950	288.3	281.4	6.8	162.4	155.6	6.8	56.2	3.6	99.4	3.2	89.0	36.9	15.4
1951	333.4	323.2	10.2	189.9	179.6	10.2	66.4	6.1	113.2	4.2	104.4	39.1	13.3
1952	351.6	348.6	3.1	195.5	192.4	3.1	72.6	1.2	119.8	1.9	115.2	40.9	12.0
1953	371.6	371.1	.4	204.6	204.2	.4	78.0	1.5	126.2	−1.1	123.4	43.6	16.1
1954	372.5	374.1	−1.6	198.0	199.6	−1.6	74.1	−2.5	125.5	.9	128.5	46.0	14.7
1955	405.9	400.2	5.7	216.3	210.6	5.7	81.7	3.4	128.9	2.3	138.5	51.1	21.2
1956	428.2	423.6	4.6	225.4	220.7	4.6	86.2	2.1	134.5	2.5	148.9	53.9	16.9
1957	451.0	449.6	1.4	234.7	233.3	1.4	91.7	.5	141.6	.9	161.6	54.8	19.4
1958	456.8	458.3	−1.5	230.5	232.0	−1.5	84.8	−2.8	147.2	1.3	170.9	55.5	14.5
1959	495.8	490.0	5.8	250.8	245.1	5.8	91.1	3.1	154.0	2.6	183.5	61.5	19.4
1960	515.3	512.3	3.1	257.2	254.1	3.1	93.8	1.6	160.3	1.4	197.4	60.7	21.3
1961	533.8	531.4	2.4	260.4	258.0	2.4	93.1	−.1	164.8	2.5	210.9	62.5	17.8
1962	574.6	568.5	6.1	281.5	275.4	6.1	103.4	3.4	172.0	2.7	226.4	66.7	22.4
1963	606.9	601.1	5.8	293.2	287.4	5.8	110.0	2.7	177.4	3.1	242.2	71.5	25.1
1964	649.8	644.4	5.4	313.5	308.1	5.4	119.6	4.0	188.5	1.4	261.1	75.2	25.9
1965	705.1	695.2	9.9	342.9	333.0	9.9	132.4	6.7	200.6	3.2	280.5	81.7	31.1
1966	772.0	757.8	14.2	380.1	365.9	14.2	147.9	10.2	218.1	4.0	307.2	84.6	30.2
1967	816.4	806.1	10.3	395.1	384.9	10.3	154.5	5.5	230.4	4.8	334.9	86.4	27.8
1968	892.7	884.8	7.9	427.4	419.5	7.9	169.1	4.7	250.4	3.2	368.0	97.2	35.0
1969	963.9	954.1	9.8	456.6	446.8	9.8	180.1	6.4	266.7	3.4	402.3	105.1	34.7
1970	1,015.5	1,012.3	3.1	467.8	464.7	3.1	182.1	−.1	282.6	3.2	441.1	106.5	28.5
1971	1,102.7	1,094.9	7.8	493.0	485.2	7.8	189.4	2.8	295.8	4.9	484.9	124.8	38.9
1972	1,212.8	1,202.3	10.5	537.4	526.9	10.5	209.7	7.2	317.2	3.3	533.2	142.1	41.4
1973	1,359.3	1,339.7	19.6	616.4	596.8	19.6	241.9	15.0	354.9	4.6	586.6	156.3	46.0
1974	1,472.8	1,457.4	15.4	663.1	647.7	15.4	257.2	11.2	390.4	4.3	650.6	159.1	38.8
1975	1,598.4	1,604.1	−5.6	714.7	720.3	−5.6	288.2	−7.0	432.2	1.3	725.2	158.5	40.3
1976	1,782.8	1,766.8	16.0	798.9	782.9	16.0	323.6	10.3	459.3	5.7	803.5	180.4	55.2
1977	1,990.5	1,969.2	21.3	882.0	860.7	21.3	369.4	9.7	491.3	11.6	895.9	212.6	64.3
1978	2,249.7	2,221.0	28.6	991.4	962.8	28.6	416.9	20.1	545.9	8.6	1,003.0	255.3	68.3
1979	2,508.2	2,495.2	13.0	1,099.1	1,086.1	13.0	473.1	10.3	613.0	2.7	1,121.9	287.1	66.9
1980	2,732.0	2,740.3	−8.3	1,174.9	1,183.2	−8.3	499.4	−2.9	683.8	−5.4	1,265.0	292.0	60.1
1981	3,052.6	3,028.6	24.0	1,322.9	1,298.9	24.0	541.1	6.8	757.8	17.2	1,415.4	314.4	69.4
1982	3,166.0	3,190.5	−24.5	1,319.1	1,343.7	−24.5	542.9	−16.8	800.8	−7.7	1,547.5	299.4	66.5
1983	3,405.7	3,412.8	−7.1	1,396.1	1,403.2	−7.1	575.3	−1.0	827.9	−6.1	1,682.5	327.1	88.6
1984	3,772.2	3,704.5	67.7	1,581.4	1,513.7	67.7	641.3	40.2	872.4	27.5	1,813.9	377.0	105.1
1985	4,014.9	4,003.6	11.3	1,641.2	1,629.9	11.3	700.1	6.5	929.8	4.9	1,968.3	405.4	116.5
1986	4,231.6	4,224.8	6.9	1,686.7	1,679.8	6.9	723.0	1.2	956.8	5.7	2,119.3	425.6	120.6
1987	4,515.6	4,487.3	28.3	1,788.4	1,760.1	28.3	757.5	23.0	1,002.6	5.4	2,292.4	434.8	119.3
1988	4,873.7	4,847.5	26.2	1,935.1	1,908.9	26.2	840.3	19.9	1,068.6	6.4	2,488.6	450.0	127.6
1989	5,200.8	5,172.5	28.3	2,072.7	2,044.4	28.3	894.7	11.9	1,149.6	16.4	2,671.2	456.9	131.3
1990 ^{p}	5,463.0	5,465.3	−2.2	2,144.4	2,146.6	−2.2	938.2	−5.5	1,208.3	3.3	2,860.5	458.2	127.8
1982: IV	3,212.5	3,272.4	−59.9	1,309.8	1,369.7	−59.9	551.8	−42.7	817.9	−17.2	1,598.9	303.9	64.5
1983: IV	3,545.8	3,514.8	31.0	1,473.7	1,442.7	31.0	611.9	16.7	830.9	14.3	1,730.1	342.0	102.1
1984: IV	3,851.8	3,806.8	45.0	1,599.9	1,554.9	45.0	667.6	33.0	887.3	12.0	1,866.5	385.4	111.5
1985: IV	4,107.9	4,100.7	7.2	1,657.4	1,650.2	7.2	697.9	8.6	952.3	−1.4	2,035.7	414.8	115.5
1986: IV	4,297.3	4,309.4	−12.2	1,694.5	1,706.6	−12.2	740.7	−9.6	965.9	−2.6	2,174.2	428.6	122.5
1987: IV	4,647.6	4,591.9	55.7	1,850.8	1,795.1	55.7	771.1	43.3	1,024.0	12.4	2,354.9	441.9	120.9
1988: I	4,735.8	4,707.4	28.3	1,875.4	1,847.1	28.3	818.3	8.9	1,028.8	19.4	2,421.2	439.2	118.1
II	4,831.4	4,809.2	22.2	1,918.5	1,896.3	22.2	841.9	9.9	1,054.3	12.3	2,461.5	451.4	132.1
III	4,917.9	4,879.7	38.2	1,952.8	1,914.6	38.2	839.7	32.8	1,074.8	5.4	2,512.3	452.8	126.1
IV	5,009.8	4,993.6	16.2	1,993.8	1,977.7	16.2	861.3	27.8	1,116.4	−11.6	2,559.4	456.5	134.0
1989: I	5,101.3	5,074.7	26.6	2,035.1	2,008.5	26.6	873.1	19.4	1,135.5	7.1	2,604.8	461.4	133.7
II	5,174.0	5,141.3	32.7	2,079.4	2,046.8	32.7	896.2	8.4	1,150.5	24.3	2,639.2	455.3	130.7
III	5,238.6	5,209.7	28.9	2,090.2	2,061.3	28.9	915.4	6.6	1,145.9	22.2	2,693.3	455.0	132.5
IV	5,289.3	5,264.3	25.0	2,085.9	2,060.9	25.0	894.2	13.2	1,166.7	11.9	2,747.5	455.9	128.2
1990: I	5,375.4	5,387.2	−11.8	2,111.0	2,122.8	−11.8	941.4	−21.6	1,181.4	9.8	2,791.3	473.0	120.3
II	5,443.3	5,429.9	13.4	2,146.6	2,133.1	13.4	930.1	.0	1,203.0	13.4	2,834.2	462.5	128.9
III	5,514.6	5,505.6	9.0	2,170.4	2,161.4	9.0	943.4	9.8	1,218.0	−.8	2,889.6	454.6	141.3
IV ^{p}	5,518.9	5,538.4	−19.5	2,149.4	2,168.9	−19.5	937.9	−10.4	1,231.0	−9.1	2,926.8	442.7	120.8

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-7.—*Gross national product by major type of product in 1982 dollars, 1929–90*

[Billions of 1982 dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product	Final sales	Inventory change	Goods							Services	Structures	Auto output
				Total			Durable goods		Nondurable goods				
				Total	Final sales	Inventory change	Final sales	Inventory change	Final sales	Inventory change			
1929	709.6	698.7	10.8	308.1	297.3	10.8	85.8	7.5	211.5	3.3	290.0	111.4	....
1933	498.5	509.2	−10.7	210.0	220.7	−10.7	34.9	−4.5	185.7	−6.2	252.1	36.5	....
1939	716.6	712.7	3.9	331.7	327.8	3.9	74.8	1.6	253.1	2.3	306.4	78.5	....
1940	772.9	758.5	14.4	370.3	355.9	14.4	91.9	7.2	264.0	7.2	318.1	84.5	....
1941	909.4	881.6	27.8	431.9	404.2	27.8	122.9	17.4	281.2	10.3	367.1	110.3	....
1942	1,080.3	1,068.3	12.0	504.1	492.1	12.0	163.3	7.5	328.8	4.5	460.4	115.8	....
1943	1,276.2	1,275.5	.7	608.6	607.9	.7	254.4	1.4	353.5	−.7	598.9	68.7	....
1944	1,380.6	1,385.7	−5.2	664.6	669.8	−5.2	292.4	−3.8	377.4	−1.4	665.0	50.9	....
1945	1,354.8	1,363.3	−8.4	639.1	647.5	−8.4	263.1	−7.8	384.4	−.6	662.3	53.5	....
1946	1,096.9	1,069.0	27.9	521.0	493.1	27.9	129.6	23.1	363.5	4.8	472.0	104.0	....
1947	1,066.7	1,067.7	−1.0	517.1	518.1	−1.0	164.7	2.8	353.4	−3.8	431.0	118.6	....
1948	1,108.7	1,096.4	12.3	531.7	519.4	12.3	166.5	3.4	353.0	8.8	438.1	138.9	24.1
1949	1,109.0	1,118.2	−9.7	517.9	527.6	−9.7	166.8	−6.1	360.8	−3.6	450.1	141.0	27.6
1950	1,203.7	1,179.5	24.2	561.4	537.2	24.2	180.0	11.4	357.1	12.8	470.4	171.9	35.5
1951	1,328.2	1,297.4	30.8	623.0	592.2	30.8	208.8	19.1	383.4	11.7	537.7	167.5	44.9
1952	1,380.0	1,370.0	10.0	641.3	631.3	10.0	229.8	3.6	401.5	6.4	567.3	171.4	38.3
1953	1,435.3	1,432.5	2.8	676.6	673.8	2.8	245.4	4.7	428.4	−2.0	577.6	181.2	34.9
1954	1,416.2	1,421.0	−4.8	643.5	648.2	−4.8	230.6	−7.7	417.7	2.9	579.5	193.2	44.8
1955	1,494.9	1,478.6	16.3	683.9	667.6	16.3	245.2	9.5	422.3	6.8	601.0	210.0	43.3
1956	1,525.6	1,512.7	12.9	697.1	684.1	12.9	248.3	6.3	435.8	6.7	619.7	208.9	58.2
1957	1,551.1	1,548.1	3.0	699.3	696.3	3.0	251.3	1.9	445.0	1.1	645.4	206.5	45.8
1958	1,539.2	1,542.6	−3.4	674.2	677.6	−3.4	229.1	−7.1	448.6	3.7	654.7	210.3	48.3
1959	1,629.1	1,612.6	16.5	716.6	700.1	16.5	236.8	8.2	463.4	8.3	681.5	231.0	37.4
1960	1,665.3	1,657.5	7.7	726.8	719.1	7.7	242.2	4.0	476.9	3.7	709.9	228.5	45.7
1961	1,708.7	1,701.4	7.3	730.2	723.0	7.3	239.2	−.1	483.7	7.3	743.0	235.4	49.6
1962	1,799.4	1,783.3	16.2	773.5	757.3	16.2	260.2	8.4	497.1	7.7	777.0	248.9	41.1
1963	1,873.3	1,856.7	16.6	797.5	780.8	16.6	273.4	7.1	507.4	9.5	811.5	264.4	49.8
1964	1,973.3	1,957.6	15.7	845.2	829.5	15.7	295.4	11.2	534.1	4.5	852.8	275.3	54.6
1965	2,087.6	2,062.4	25.2	904.0	878.8	25.2	322.2	17.4	556.5	7.8	891.6	292.0	55.3
1966	2,208.3	2,171.5	36.9	974.7	937.8	36.9	354.2	26.3	583.6	10.6	942.7	291.0	66.9
1967	2,271.4	2,242.6	28.8	993.1	964.3	28.8	363.6	14.4	600.7	14.4	990.6	287.6	64.8
1968	2,365.6	2,344.6	21.0	1,024.8	1,003.7	21.0	378.5	11.8	625.3	9.3	1,032.0	308.8	58.3
1969	2,423.3	2,398.1	25.1	1,048.5	1,023.3	25.1	389.7	15.2	633.6	9.9	1,066.9	307.9	70.5
1970	2,416.2	2,407.9	8.2	1,030.0	1,021.7	8.2	381.7	−.5	640.1	8.8	1,092.4	293.8	67.6
1971	2,484.8	2,465.2	19.6	1,037.6	1,017.9	19.6	375.5	7.1	642.4	12.5	1,126.1	321.2	53.1
1972	2,608.5	2,586.8	21.8	1,093.8	1,072.1	21.8	409.4	15.4	662.7	6.4	1,169.4	345.4	69.8
1973	2,744.1	2,704.1	40.0	1,175.0	1,135.0	40.0	474.9	30.8	660.1	9.2	1,218.7	350.4	73.9
1974	2,729.3	2,696.0	33.3	1,159.2	1,125.9	33.3	476.0	20.0	649.9	13.3	1,256.4	313.7	82.0
1975	2,695.0	2,707.8	−12.8	1,125.0	1,137.8	−12.8	471.1	−11.4	666.7	−1.4	1,286.4	283.6	65.4
1976	2,826.7	2,804.6	22.1	1,194.7	1,172.5	22.1	490.9	15.9	681.7	6.3	1,324.4	307.6	61.8
1977	2,958.6	2,929.5	29.1	1,256.2	1,227.1	29.1	534.0	14.2	693.1	14.9	1,368.7	333.7	80.1
1978	3,115.2	3,078.4	36.8	1,329.1	1,292.4	36.8	572.5	27.5	719.9	9.3	1,426.9	359.1	88.7
1979	3,192.4	3,177.4	15.0	1,354.6	1,339.6	15.0	604.6	13.3	735.1	1.7	1,478.6	359.2	87.3
1980	3,187.1	3,194.0	−6.9	1,344.2	1,351.1	−6.9	584.0	−3.2	767.1	−3.7	1,511.1	331.8	80.2
1981	3,248.8	3,225.0	23.9	1,386.0	1,362.2	23.9	578.5	6.9	783.7	16.9	1,533.4	329.4	67.1
1982	3,166.0	3,190.5	−24.5	1,319.1	1,343.7	−24.5	542.9	−16.8	800.8	−7.7	1,547.5	299.4	73.3
1983	3,279.1	3,285.5	−6.4	1,367.0	1,373.4	−6.4	566.3	−1.2	807.0	−5.2	1,585.5	326.6	66.5
1984	3,501.4	3,439.1	62.3	1,509.2	1,446.9	62.3	623.5	38.2	823.3	24.2	1,625.2	367.1	85.9
1985	3,618.7	3,609.6	9.1	1,553.6	1,544.5	9.1	686.1	5.6	858.4	3.5	1,684.3	380.8	98.5
1986	3,717.9	3,712.4	5.6	1,592.6	1,587.1	5.6	718.6	.9	868.5	4.7	1,738.9	386.4	106.5
1987	3,845.3	3,822.5	22.8	1,663.4	1,640.6	22.8	765.0	20.7	875.5	2.2	1,798.1	383.8	106.4
1988	4,016.9	3,993.2	23.6	1,765.2	1,741.6	23.6	856.7	17.8	884.9	5.8	1,870.5	381.1	102.3
1989	4,117.7	4,094.0	23.8	1,829.5	1,805.7	23.8	897.7	9.8	908.0	13.9	1,915.6	372.7	109.9
1990 p	4,155.8	4,156.9	−1.1	1,830.3	1,831.4	−1.1	928.7	−4.7	902.7	3.6	1,958.0	367.5	110.4
1982: IV	3,159.3	3,218.6	−59.3	1,297.9	1,357.1	−59.3	543.8	−42.4	813.4	−16.9	1,555.5	305.9	105.6
1983: IV	3,365.1	3,338.1	27.0	1,423.8	1,396.8	27.0	598.0	16.1	798.8	10.9	1,600.7	340.6	63.3
1984: IV	3,535.2	3,493.5	41.7	1,520.2	1,478.5	41.7	647.8	31.1	830.7	10.6	1,644.7	370.3	96.4
1985: IV	3,662.4	3,654.7	7.7	1,564.7	1,557.0	7.7	687.7	7.3	869.4	.4	1,712.5	385.2	104.2
1986: IV	3,733.6	3,754.4	−20.8	1,595.7	1,616.5	−20.8	738.6	−9.0	877.9	−11.8	1,753.1	384.8	104.8
1987: IV	3,920.7	3,872.3	48.4	1,716.4	1,667.9	48.4	784.6	39.0	883.3	9.4	1,818.8	385.6	106.7
1988: I	3,970.2	3,939.2	31.0	1,742.0	1,711.0	31.0	836.1	8.9	874.8	22.1	1,850.9	377.3	104.1
II	4,005.8	3,988.9	16.9	1,761.4	1,744.5	16.9	861.0	8.8	883.6	8.1	1,860.3	384.1	100.9
III	4,032.1	3,999.5	32.6	1,770.8	1,738.1	32.6	856.1	29.5	882.0	3.2	1,878.9	382.4	113.9
IV	4,059.3	4,045.2	14.0	1,786.8	1,772.7	14.0	873.5	24.1	899.3	−10.1	1,891.9	380.6	108.5
1989: I	4,095.7	4,069.6	26.1	1,819.7	1,793.7	26.1	880.8	16.5	912.9	9.6	1,896.6	379.4	116.2
II	4,112.2	4,086.6	25.5	1,838.5	1,813.0	25.5	901.6	7.2	911.4	18.4	1,902.5	371.1	113.5
III	4,129.7	4,105.1	24.6	1,836.5	1,811.9	24.6	914.1	5.4	897.7	19.2	1,923.5	369.8	110.3
IV	4,133.2	4,114.4	18.9	1,823.1	1,804.3	18.9	894.2	10.2	910.1	8.6	1,939.7	370.4	111.4
1990: I	4,150.6	4,152.8	−2.2	1,825.4	1,827.6	−2.2	932.1	−17.7	895.5	15.5	1,943.7	381.5	106.3
II	4,155.1	4,145.6	9.5	1,831.3	1,821.8	9.5	919.5	−.3	902.4	9.8	1,952.5	371.2	99.0
III	4,170.0	4,165.3	4.7	1,839.7	1,835.0	4.7	932.9	8.3	902.1	−3.6	1,967.3	363.1	107.3
IV p	4,147.6	4,163.9	−16.3	1,824.9	1,841.2	−16.3	930.6	−9.0	910.6	−7.3	1,968.6	354.1	117.2

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–8.—*Gross national product by sector, 1929–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product	Gross domestic product									Rest of the world
		Total	Business [1]				Households and institutions	Government [2]			
			Total [1]	Nonfarm [1]	Farm	Statistical discrepancy		Total	Federal	State and local	
1929	103.9	103.2	96.0	84.8	9.7	1.5	2.9	4.4	0.9	3.5	0.8
1933	56.0	55.7	49.3	43.6	4.6	1.2	1.7	4.7	1.2	3.5	.3
1939	91.3	90.9	81.0	73.0	6.3	1.7	2.3	7.6	3.5	4.2	.4
1940	100.4	100.1	89.8	82.0	6.4	1.4	2.4	7.8	3.5	4.3	.4
1941	125.5	125.0	113.0	103.4	8.9	.7	2.5	9.5	5.1	4.4	.5
1942	159.0	158.5	140.4	128.0	13.0	−.7	2.9	15.2	10.7	4.5	.5
1943	192.7	192.3	163.4	149.8	15.3	−1.7	3.2	25.6	21.0	4.7	.4
1944	211.4	210.9	174.9	156.9	15.3	2.7	3.7	32.3	27.3	4.9	.5
1945	213.4	213.0	173.5	153.5	16.0	4.0	4.1	35.3	30.0	5.4	.4
1946	212.4	211.6	184.8	165.2	18.8	.7	4.5	22.4	16.2	6.2	.7
1947	235.2	234.1	211.3	189.3	20.2	1.8	5.1	17.6	10.3	7.3	1.2
1948	261.6	260.1	236.4	214.4	23.3	−1.3	5.6	18.1	9.6	8.5	1.5
1949	260.4	259.0	232.9	213.3	18.8	.8	5.9	20.1	10.7	9.4	1.4
1950	288.3	286.7	259.0	238.3	20.0	.8	6.5	21.2	11.1	10.1	1.5
1951	333.4	331.4	296.7	271.1	22.9	2.7	6.9	27.7	16.6	11.2	2.0
1952	351.6	349.4	310.7	286.7	22.2	1.8	7.2	31.5	19.3	12.3	2.2
1953	371.6	369.5	329.3	306.3	20.3	2.6	7.8	32.4	19.1	13.3	2.1
1954	372.5	370.3	329.1	306.7	19.7	2.7	8.1	33.0	18.3	14.7	2.2
1955	405.9	403.3	359.4	338.8	18.8	1.8	9.1	34.8	19.0	15.8	2.6
1956	428.2	425.2	378.1	361.4	18.6	−1.9	9.9	37.2	19.6	17.6	3.0
1957	451.0	447.7	397.3	380.1	18.4	−1.2	10.6	39.8	20.2	19.6	3.4
1958	456.8	453.9	399.5	378.9	20.7	−.1	11.5	42.9	21.3	21.6	2.9
1959	495.8	492.7	435.5	417.9	19.0	−1.5	12.4	44.8	21.7	23.1	3.1
1960	515.3	511.8	449.9	432.5	20.2	−2.8	13.9	48.1	22.6	25.5	3.5
1961	533.8	530.0	463.9	445.0	20.2	−1.2	14.5	51.6	23.6	27.9	3.8
1962	574.6	570.1	499.1	478.6	20.4	.0	15.6	55.4	25.2	30.2	4.5
1963	606.9	602.0	526.0	506.2	20.5	−.6	16.7	59.3	26.5	32.9	4.9
1964	649.8	644.4	562.1	544.3	19.3	−1.4	17.9	64.4	28.5	35.9	5.4
1965	705.1	699.3	610.7	590.0	21.9	−1.2	19.3	69.3	30.0	39.3	5.8
1966	772.0	766.3	666.7	641.7	22.8	2.1	21.3	78.4	34.3	44.1	5.6
1967	816.4	810.4	699.7	677.8	22.2	−.4	23.4	87.4	37.8	49.5	6.0
1968	892.7	885.9	762.0	740.4	22.7	−1.1	26.1	97.8	41.9	55.9	6.8
1969	963.9	957.1	820.1	798.8	25.2	−3.9	29.5	107.5	44.9	62.6	6.8
1970	1,015.5	1,008.2	856.3	831.2	26.3	−1.1	32.4	119.5	48.4	71.1	7.3
1971	1,102.7	1,093.4	927.4	897.5	28.1	1.8	35.6	130.3	51.1	79.3	9.3
1972	1,212.8	1,201.6	1,020.0	988.8	32.8	−1.6	39.0	142.6	54.9	87.7	11.2
1973	1,359.3	1,343.1	1,145.0	1,098.3	51.0	−4.3	43.0	155.0	57.1	97.9	16.2
1974	1,472.8	1,453.3	1,237.5	1,190.0	49.2	−1.7	47.2	168.7	61.1	107.6	19.5
1975	1,598.4	1,580.9	1,341.2	1,288.4	50.3	2.5	52.0	187.7	66.5	121.1	17.5
1976	1,782.8	1,761.7	1,500.7	1,448.7	48.5	3.6	57.1	203.8	70.9	132.9	21.1
1977	1,990.5	1,965.1	1,682.1	1,631.7	50.4	.0	62.4	220.5	75.5	145.0	25.4
1978	2,249.7	2,219.1	1,908.4	1,850.0	60.3	−1.9	70.2	240.5	81.7	158.9	30.5
1979	2,508.2	2,464.4	2,125.3	2,054.5	71.8	−1.0	78.6	260.4	86.9	173.5	43.8
1980	2,732.0	2,684.4	2,306.8	2,236.4	65.5	4.9	89.3	288.3	96.1	192.2	47.6
1981	3,052.6	3,000.5	2,582.8	2,498.9	79.8	4.1	101.0	316.7	107.4	209.3	52.1
1982	3,166.0	3,114.8	2,658.2	2,581.3	77.0	−.1	112.7	343.9	117.0	226.9	51.2
1983	3,405.7	3,355.9	2,866.6	2,802.1	59.3	5.2	122.9	366.4	124.7	241.7	49.9
1984	3,772.2	3,724.8	3,201.5	3,118.5	77.6	5.4	132.7	390.6	132.1	258.5	47.4
1985	4,014.9	3,974.1	3,412.8	3,342.2	75.4	−4.8	142.3	419.0	140.2	278.8	40.7
1986	4,231.6	4,197.2	3,599.9	3,525.9	75.8	−1.8	153.5	443.8	143.5	300.3	34.4
1987	4,515.6	4,486.7	3,844.9	3,776.7	78.8	−10.6	169.9	471.9	150.8	321.1	29.0
1988	4,873.7	4,840.2	4,147.8	4,095.3	80.7	−28.2	187.3	505.1	159.3	345.8	33.5
1989	5,200.8	5,163.2	4,418.1	4,346.6	88.6	−17.0	203.6	541.6	168.6	373.0	37.6
1990 [p]	5,463.0	5,424.4	4,620.3	4,530.2	93.2	−3.1	224.8	579.4	178.5	400.9	38.6
1982: IV	3,212.5	3,163.8	2,693.6	2,607.7	79.0	6.8	116.9	353.4	120.7	232.6	48.7
1983: IV	3,545.8	3,494.6	2,994.8	2,932.7	59.6	2.5	126.6	373.1	126.0	247.2	51.3
1984: IV	3,851.8	3,805.9	3,270.6	3,198.7	74.0	−2.1	136.1	399.1	134.0	265.1	46.0
1985: IV	4,107.9	4,065.9	3,490.7	3,422.4	76.2	−7.9	146.6	428.6	142.4	286.2	42.0
1986: IV	4,297.3	4,267.9	3,655.6	3,587.1	78.1	−9.6	157.9	454.4	144.6	309.8	29.4
1987: IV	4,647.6	4,617.4	3,958.3	3,895.0	82.1	−18.8	177.1	482.0	152.7	329.3	30.2
1988: I	4,735.8	4,699.0	4,023.7	3,965.1	83.3	−24.7	180.9	494.4	158.1	336.3	36.8
II	4,831.4	4,801.3	4,115.0	4,056.1	82.7	−23.9	185.1	501.2	158.9	342.4	30.1
III	4,917.9	4,886.5	4,188.0	4,131.9	90.0	−33.9	190.0	508.6	159.7	348.9	31.4
IV	5,009.8	4,974.0	4,264.4	4,228.2	66.7	−30.5	193.3	516.4	160.7	355.7	35.7
1989: I	5,101.3	5,063.5	4,336.7	4,272.7	92.6	−28.6	196.6	530.3	167.5	362.8	37.8
II	5,174.0	5,141.4	4,402.8	4,334.7	88.4	−20.3	200.8	537.8	168.2	369.6	32.6
III	5,238.6	5,201.4	4,449.8	4,379.4	86.7	−16.2	206.5	545.1	168.7	376.4	37.2
IV	5,289.3	5,246.5	4,483.1	4,399.5	86.7	−3.0	210.3	553.0	169.7	383.3	42.8
1990: I	5,375.4	5,333.8	4,551.8	4,455.8	95.3	.7	215.0	567.0	176.6	390.4	41.6
II	5,443.3	5,411.7	4,613.5	4,522.1	94.6	−3.2	221.4	576.7	179.2	397.5	31.6
III	5,514.6	5,471.7	4,659.6	4,571.4	93.1	−4.9	229.3	582.8	178.3	404.5	42.9
IV [p]	5,518.9	5,480.6	4,656.2	4,571.4	89.7	−4.9	233.5	590.9	179.7	411.2	38.3

[1] Includes compensation of employees in government enterprises.
[2] Compensation of government employees.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–9.—*Gross national product by sector in 1982 dollars, 1929–90*

[Billions of 1982 dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product	Gross domestic product									Rest of the world
		Total	Business [1]				Households and institutions	Government [2]			
			Total [1]	Nonfarm [1]	Farm	Statistical discrepancy		Total	Federal	State and local	
1929	709.6	704.6	611.6	547.8	54.1	9.7	34.4	58.6	13.2	45.3	4.9
1933	498.5	496.1	404.9	338.7	56.6	9.6	27.1	64.0	16.2	47.9	2.4
1939	716.6	713.5	586.8	518.3	56.4	12.1	33.3	93.4	38.9	54.6	3.1
1940	772.9	770.3	635.5	571.2	54.6	9.7	35.8	99.0	44.1	55.0	2.6
1941	909.4	906.0	738.7	675.8	58.1	4.8	35.8	131.5	76.2	55.3	3.4
1942	1,080.3	1,077.1	832.9	774.4	62.4	−4.0	36.9	207.4	152.9	54.4	3.1
1943	1,276.2	1,273.4	891.6	841.6	59.2	−9.2	34.3	347.6	294.6	52.9	2.7
1944	1,380.6	1,377.7	934.3	862.5	57.2	14.6	34.3	409.1	357.5	51.7	2.9
1945	1,354.8	1,352.6	914.3	839.3	53.7	21.3	34.4	403.8	350.7	53.2	2.3
1946	1,096.9	1,093.3	866.3	809.0	54.0	3.3	35.4	191.6	135.0	56.6	3.6
1947	1,066.7	1,061.6	886.1	828.6	49.9	7.6	37.9	137.7	76.7	61.0	5.1
1948	1,108.7	1,102.5	925.4	875.1	55.2	−4.9	41.2	135.8	73.2	62.6	6.2
1949	1,109.0	1,103.4	916.7	858.5	55.0	3.2	42.4	144.2	77.1	67.1	5.6
1950	1,203.7	1,197.4	1,002.8	941.4	58.3	3.1	45.0	149.6	80.3	69.3	6.2
1951	1,328.2	1,320.3	1,080.5	1,014.9	56.0	9.7	46.1	193.7	122.8	71.0	7.9
1952	1,380.0	1,371.7	1,114.7	1,050.9	57.2	6.5	46.2	210.7	137.5	73.3	8.3
1953	1,435.3	1,427.4	1,170.0	1,101.3	59.3	9.4	47.7	209.7	133.2	76.5	7.9
1954	1,416.2	1,407.8	1,154.6	1,084.2	60.9	9.5	48.4	204.8	125.0	79.8	8.4
1955	1,494.9	1,485.5	1,229.7	1,161.5	62.0	6.2	53.2	202.6	119.2	83.4	9.4
1956	1,525.6	1,515.0	1,254.1	1,199.6	60.7	−6.2	56.1	204.8	116.1	88.7	10.7
1957	1,551.1	1,539.7	1,274.0	1,219.0	58.8	−3.8	57.7	208.0	114.5	93.5	11.5
1958	1,539.2	1,529.7	1,260.4	1,199.7	61.2	−.5	60.7	208.6	109.5	99.2	9.5
1959	1,629.1	1,619.1	1,345.8	1,291.6	58.8	−4.6	62.7	210.6	107.5	103.1	10.0
1960	1,665.3	1,654.1	1,369.7	1,317.2	61.1	−8.7	67.4	217.1	108.9	108.2	11.1
1961	1,708.7	1,696.6	1,403.2	1,346.7	60.2	−3.7	68.0	225.4	111.5	113.9	12.1
1962	1,799.4	1,785.6	1,480.9	1,421.1	59.8	.1	70.7	233.9	116.7	117.3	13.9
1963	1,873.3	1,858.5	1,546.7	1,488.7	59.8	−1.8	72.5	239.2	116.1	123.1	14.9
1964	1,973.3	1,957.1	1,635.2	1,581.6	57.7	−4.1	74.6	247.3	116.8	130.5	16.1
1965	2,087.6	2,070.6	1,737.4	1,681.8	59.0	−3.4	77.4	255.8	117.3	138.5	17.0
1966	2,208.3	2,192.5	1,837.1	1,776.5	54.7	5.9	80.4	275.0	128.1	146.9	15.9
1967	2,271.4	2,255.0	1,880.9	1,824.2	57.7	−1.0	83.1	291.0	138.5	152.4	16.3
1968	2,365.6	2,347.9	1,961.1	1,908.3	55.7	−2.8	85.6	301.2	140.7	160.5	17.7
1969	2,423.3	2,406.2	2,009.8	1,962.1	57.2	−9.5	88.2	308.2	141.0	167.2	17.0
1970	2,416.2	2,399.1	2,004.4	1,946.4	60.7	−2.7	87.0	307.7	133.2	174.5	17.1
1971	2,484.8	2,464.1	2,068.0	2,001.4	62.3	4.2	88.8	307.4	125.5	181.9	20.7
1972	2,608.5	2,584.9	2,186.6	2,128.0	62.0	−3.4	91.2	307.1	118.3	188.8	23.7
1973	2,744.1	2,711.8	2,309.1	2,256.6	61.1	−8.6	93.4	309.3	113.6	195.7	32.2
1974	2,729.3	2,693.5	2,283.9	2,226.5	60.7	−3.3	93.9	315.7	113.5	202.1	35.9
1975	2,695.0	2,665.7	2,249.6	2,180.6	64.8	4.2	96.4	319.6	112.8	206.8	29.3
1976	2,826.7	2,793.7	2,374.8	2,306.6	62.5	5.6	97.0	321.9	112.7	209.2	33.0
1977	2,958.6	2,921.2	2,497.2	2,434.9	62.2	.1	98.0	326.0	112.7	213.3	37.4
1978	3,115.2	3,073.0	2,639.2	2,581.0	61.0	−2.8	101.0	332.8	113.9	219.0	42.1
1979	3,192.4	3,136.6	2,696.4	2,633.2	64.6	−1.4	103.7	336.5	113.0	223.5	55.7
1980	3,187.1	3,131.7	2,683.2	2,613.1	64.2	5.9	107.3	341.2	114.4	226.8	55.5
1981	3,248.8	3,193.6	2,739.8	2,659.6	75.7	4.4	109.9	343.9	115.8	228.1	55.2
1982	3,166.0	3,114.8	2,658.2	2,581.3	77.0	−.1	112.7	343.9	117.0	226.9	51.2
1983	3,279.1	3,231.2	2,770.1	2,703.7	61.3	5.0	114.9	346.3	119.0	227.3	47.9
1984	3,501.4	3,457.5	2,990.1	2,916.6	68.5	5.0	117.6	349.8	120.5	229.3	43.9
1985	3,618.7	3,581.9	3,103.3	3,028.1	79.4	−4.3	121.3	357.4	122.3	235.0	36.9
1986	3,717.9	3,687.4	3,198.2	3,115.7	84.1	−1.6	125.7	363.5	122.6	240.8	30.5
1987	3,845.3	3,820.0	3,320.1	3,245.4	83.8	−9.1	129.5	370.4	124.3	246.1	25.3
1988	4,016.9	3,988.6	3,473.9	3,422.2	75.3	−23.6	137.5	377.2	126.1	251.1	28.3
1989	4,117.7	4,087.6	3,557.9	3,492.9	78.8	−13.8	146.2	383.5	126.5	257.0	30.2
1990 [p]	4,155.8	4,126.2	3,581.9	3,504.4	79.9	−2.4	154.6	389.7	127.6	262.1	29.6
1982: IV	3,159.3	3,111.3	2,654.1	2,567.1	80.3	6.7	113.8	343.5	117.6	225.9	48.0
1983: IV	3,365.1	3,316.6	2,853.2	2,795.3	55.6	2.3	115.8	347.5	119.4	228.1	48.5
1984: IV	3,535.2	3,493.1	3,022.2	2,953.0	71.1	−1.9	119.0	351.9	121.2	230.7	42.1
1985: IV	3,662.4	3,624.7	3,141.7	3,066.2	82.5	−7.1	123.2	359.9	122.5	237.4	37.6
1986: IV	3,733.6	3,707.7	3,215.1	3,137.2	86.4	−8.5	126.3	366.3	123.2	243.1	25.9
1987: IV	3,920.7	3,894.6	3,389.1	3,318.8	86.4	−16.1	132.1	373.4	125.5	247.9	26.2
1988: I	3,970.2	3,938.7	3,429.4	3,365.1	85.4	−21.1	134.2	375.1	126.0	249.1	31.5
II	4,005.8	3,980.1	3,467.6	3,408.8	78.9	−20.1	136.3	376.2	125.8	250.4	25.7
III	4,032.1	4,005.7	3,488.7	3,442.4	74.5	−28.2	139.0	378.0	126.2	251.8	26.4
IV	4,059.3	4,029.7	3,509.7	3,472.4	62.3	−25.1	140.4	379.6	126.4	253.3	29.5
1989: I	4,095.7	4,064.8	3,541.5	3,484.1	80.8	−23.3	142.3	381.1	126.2	254.9	30.9
II	4,112.2	4,085.8	3,557.9	3,496.4	77.9	−16.4	145.2	382.7	126.4	256.3	26.4
III	4,129.7	4,100.1	3,567.9	3,503.5	77.4	−13.0	148.0	384.2	126.5	257.7	29.6
IV	4,133.2	4,099.5	3,564.4	3,487.5	79.3	−2.4	149.2	385.9	126.8	259.2	33.7
1990: I	4,150.6	4,118.2	3,580.0	3,500.3	79.1	.6	150.8	387.4	127.0	260.4	32.4
II	4,155.1	4,130.6	3,587.2	3,510.3	79.4	−2.5	153.6	389.9	128.2	261.7	24.5
III	4,170.0	4,137.5	3,590.8	3,514.3	80.2	−3.7	156.7	390.0	127.4	262.7	32.6
IV [p]	4,147.6	4,118.6	3,569.9	3,492.7	80.9	−3.7	157.2	391.5	127.8	263.6	29.0

[1] Includes compensation of employees in government enterprises.

[2] Compensation of government employees

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–10.—*Gross national product by industry, 1947–88*

[Billions of dollars]

Year	Gross national product	Gross domestic product												Rest of the world
		Agriculture, forestry, and fisheries	Mining	Construction	Manufacturing			Transportation and public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Services	Government and government enterprises	Statistical discrepancy	
					Total	Durable goods	Nondurable goods							
1947	235.2	20.8	6.8	9.1	66.2	33.5	32.7	21.0	44.2	23.8	20.2	20.2	1.8	1.2
1948	261.6	24.0	9.4	11.5	74.7	38.2	36.6	23.7	48.4	26.9	21.9	20.8	−1.3	1.5
1949	260.4	19.5	8.1	11.5	72.2	37.1	35.0	23.9	48.0	29.2	22.6	23.2	.8	1.4
1950	288.3	20.8	9.3	13.2	84.0	45.9	38.1	26.6	51.5	32.2	24.2	24.2	.8	1.5
1951	333.4	23.9	10.2	15.6	99.0	55.5	43.4	30.2	56.8	35.5	26.4	31.2	2.7	2.0
1952	351.6	23.2	10.2	16.9	103.3	59.0	44.3	32.2	59.0	39.1	28.1	35.7	1.8	2.2
1953	371.6	21.4	10.7	17.5	112.5	66.1	46.4	34.2	60.4	43.3	30.2	36.8	2.6	2.1
1954	372.5	20.8	11.0	17.7	106.7	61.0	45.7	33.8	61.6	47.0	31.6	37.4	2.7	2.2
1955	405.9	20.0	12.5	19.1	121.3	70.8	50.4	36.8	67.0	50.7	35.1	39.0	1.8	2.6
1956	428.2	19.8	13.6	21.3	127.2	73.9	53.3	39.6	71.3	54.3	38.7	41.2	−1.9	3.0
1957	451.0	19.6	13.7	22.2	131.8	78.0	53.9	41.7	75.0	58.5	41.7	44.5	−1.2	3.4
1958	456.8	22.1	12.6	21.8	124.3	70.0	54.3	41.9	76.4	63.1	44.0	47.8	−.1	2.9
1959	495.8	20.4	12.5	23.7	141.8	81.6	60.3	45.1	83.3	68.2	48.3	50.8	−1.5	3.1
1960	515.3	21.7	12.8	24.3	144.4	82.5	61.9	47.3	85.7	72.8	51.4	54.2	−2.8	3.5
1961	533.8	21.8	12.9	25.3	145.0	81.6	63.3	48.9	88.0	76.9	54.9	57.6	−1.2	3.8
1962	574.6	22.3	13.1	27.1	158.6	91.9	66.8	51.9	94.1	81.7	59.2	62.1	.0	4.5
1963	606.9	22.3	13.4	28.9	168.1	98.0	70.1	54.8	98.2	86.5	63.3	67.0	−.6	4.9
1964	649.8	21.4	13.8	31.6	180.2	105.7	74.5	58.3	107.1	92.0	69.0	72.5	−1.4	5.4
1965	705.1	24.2	14.0	34.7	198.4	118.4	80.0	62.6	115.0	98.9	74.6	78.2	−1.2	5.8
1966	772.0	25.3	14.6	37.9	217.4	130.8	86.6	67.4	124.1	106.9	82.5	88.1	2.1	5.6
1967	816.4	24.9	15.2	39.7	222.9	133.7	89.2	70.7	132.9	115.6	90.6	98.4	−.4	6.0
1968	892.7	25.7	16.2	43.5	243.6	146.1	97.5	76.4	146.8	125.1	99.1	110.5	−1.1	6.8
1969	963.9	28.6	17.1	48.7	257.1	154.2	102.9	82.6	159.2	136.3	110.5	121.0	−3.9	6.8
1970	1,015.5	29.9	18.7	51.4	252.3	145.9	106.3	88.4	168.7	145.8	120.2	134.0	−1.1	7.3
1971	1,102.7	32.2	18.8	56.5	265.7	153.8	111.9	97.1	183.7	161.4	130.2	145.9	1.8	9.3
1972	1,212.8	37.4	20.2	63.0	292.5	172.6	119.9	108.0	202.6	174.8	144.6	160.1	−1.6	11.2
1973	1,359.3	56.2	23.4	70.4	326.4	195.4	131.0	118.7	225.6	190.5	163.2	173.1	−4.3	16.2
1974	1,472.8	55.0	36.9	74.5	338.5	201.7	136.7	129.1	246.0	206.7	179.4	189.0	−1.7	19.5
1975	1,598.4	56.3	41.3	76.5	357.3	206.3	151.0	141.7	273.7	221.7	199.8	210.1	2.5	17.5
1976	1,782.8	55.7	46.0	86.2	409.3	239.7	169.7	160.4	299.7	246.1	224.9	229.7	3.6	21.1
1977	1,990.5	58.9	50.2	97.9	465.3	277.7	187.7	178.9	332.8	280.3	253.4	247.4	.0	25.4
1978	2,249.7	70.1	56.5	115.6	518.8	317.4	201.4	201.0	373.4	326.3	289.1	270.3	−1.9	30.5
1979	2,508.2	83.1	72.7	131.4	561.8	345.2	216.5	216.1	415.8	363.3	328.7	292.4	−1.0	43.8
1980	2,732.0	77.2	107.3	137.7	581.0	351.8	229.2	240.8	438.9	400.6	374.0	322.1	4.9	47.6
1981	3,052.6	92.0	143.7	138.4	643.1	385.8	257.3	269.6	483.1	449.3	422.6	354.7	4.1	52.1
1982	3,166.0	89.6	132.1	140.9	634.6	362.5	272.1	288.4	506.5	475.1	463.6	383.9	−.1	51.2
1983	3,405.7	74.3	118.4	149.6	683.2	385.6	297.6	320.0	542.9	536.4	515.5	410.5	5.2	49.9
1984	3,772.2	92.9	119.4	171.5	771.9	451.1	320.8	354.4	613.9	572.8	580.2	442.5	5.4	47.4
1985	4,014.9	92.0	114.2	186.6	789.5	458.8	330.8	374.1	658.2	639.5	648.1	476.7	−4.8	40.7
1986	4,231.6	93.6	74.3	203.8	832.4	478.1	354.3	394.9	682.5	696.3	717.6	503.5	−1.8	34.4
1987	4,524.3	98.3	77.0	216.9	872.1	495.4	376.6	415.9	724.8	764.9	792.7	535.9	−4.7	30.5
1988	4,880.6	99.8	80.4	232.6	948.6	530.3	418.3	441.4	780.8	830.3	872.5	570.6	−9.6	33.3

Note.—The industry classification is on an establishment basis and is based on the 1972 Standard Industrial Classification.

Data in this table reflect the annual revisions of the national income and product accounts (NIPA) published in July 1989. Later this year, estimates will be published for 1987–89 consistent with the NiPA revisions of July 1990.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-11.—*Gross national product by industry in 1982 dollars, 1947–88*

[Billions of 1982 dollars]

Year	Gross national product	Gross domestic product													Rest of the world
		Agriculture, forestry, and fisheries	Mining	Construction	Manufacturing			Transportation and public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Services	Government and government enterprises	Statistical discrepancy [1]	Residual [2]	
					Total	Durable goods	Nondurable goods								
1947	1,066.7	55.6	67.6	76.7	226.1	138.1	88.0	100.0	157.8	103.0	124.7	156.2	7.6	−13.6	5.1
1948	1,108.7	61.3	72.4	90.0	238.5	145.0	93.5	98.7	161.9	107.7	128.9	155.5	−4.9	−7.5	6.2
1949	1,109.0	61.0	65.7	89.4	226.3	133.2	93.1	90.7	166.1	112.2	129.0	164.0	3.2	−4.2	5.6
1950	1,203.7	64.3	72.8	100.0	257.7	156.7	101.0	95.3	182.1	119.7	133.8	169.2	3.1	−.6	6.2
1951	1,328.2	62.6	80.8	110.9	288.4	181.4	107.0	104.9	183.7	126.4	136.9	214.0	9.7	2.0	7.9
1952	1,380.0	64.2	81.5	115.9	298.2	190.6	107.6	104.5	189.5	134.7	139.4	231.9	6.5	5.3	8.3
1953	1,435.3	66.3	84.3	119.9	319.9	208.4	111.5	106.7	195.6	142.2	142.7	230.9	9.4	9.4	7.9
1954	1,416.2	68.2	83.3	124.8	296.6	185.8	110.8	104.1	197.1	149.5	145.9	225.4	9.5	3.5	8.4
1955	1,494.9	69.1	92.0	133.3	327.7	208.5	119.2	112.3	215.0	160.2	153.0	223.4	6.2	−6.6	9.4
1956	1,525.6	67.8	96.5	142.7	330.6	207.3	123.3	117.7	221.5	168.8	161.1	225.6	−6.2	−11.1	10.7
1957	1,551.1	65.9	96.2	142.4	332.5	208.7	123.8	119.9	225.1	178.3	168.6	229.2	−3.8	−14.7	11.5
1958	1,539.2	68.3	89.1	147.5	303.5	180.1	123.4	116.1	225.0	184.5	174.3	230.1	−.5	−8.1	9.5
1959	1,629.1	65.8	94.1	160.4	338.0	203.0	135.0	123.5	240.7	195.9	183.5	232.8	−4.6	−11.0	10.0
1960	1,665.3	68.3	94.2	163.1	338.7	202.4	136.3	127.8	245.4	206.5	190.2	240.3	−8.7	−11.6	11.1
1961	1,708.7	67.5	95.6	165.1	339.4	199.9	139.5	130.0	247.8	215.0	197.7	249.2	−3.7	−6.9	12.1
1962	1,799.4	67.1	98.1	172.5	368.3	220.5	147.8	136.3	263.9	226.5	207.7	258.4	.1	−13.3	13.9
1963	1,873.3	67.2	102.2	177.5	397.4	238.9	158.5	143.8	273.9	235.9	217.4	264.5	−1.8	−19.7	14.9
1964	1,973.3	65.2	105.7	185.9	425.4	259.3	166.2	150.4	290.7	245.8	230.7	274.0	−4.1	−12.6	16.1
1965	2,087.6	66.7	109.4	193.7	462.5	286.9	175.6	161.5	309.8	259.8	240.4	284.3	−3.4	−14.0	17.0
1966	2,208.3	62.4	115.0	194.4	497.9	312.3	185.6	174.2	326.5	271.1	253.9	305.5	5.9	−14.5	15.9
1967	2,271.4	65.5	120.2	190.7	496.6	311.9	184.7	178.1	335.4	282.4	265.2	322.3	−1.0	−.2	16.3
1968	2,365.6	63.6	124.7	190.2	522.0	326.2	195.8	189.5	354.8	296.0	274.7	332.6	−2.8	2.8	17.7
1969	2,423.3	65.3	128.9	183.6	536.7	334.1	202.6	200.3	361.7	314.0	287.8	340.2	−9.5	−2.7	17.0
1970	2,416.2	68.8	134.5	168.0	506.8	304.8	202.0	203.9	367.6	320.7	295.7	339.6	−2.7	−3.9	17.1
1971	2,484.8	70.6	132.4	162.7	515.5	305.5	210.0	209.8	385.7	335.9	302.4	340.0	4.2	4.8	20.7
1972	2,608.5	70.9	134.4	166.7	561.2	336.5	224.8	223.8	414.8	350.9	320.0	340.5	−3.4	5.1	23.7
1973	2,744.1	70.3	133.4	170.4	621.3	377.0	244.3	243.0	437.0	367.7	340.2	343.4	−8.6	−6.2	32.2
1974	2,729.3	69.7	130.3	162.3	591.6	363.5	228.1	248.8	426.2	381.6	347.5	350.6	−3.3	−11.8	35.9
1975	2,695.0	73.1	125.6	149.4	547.5	325.2	222.2	246.4	433.1	387.6	352.4	355.0	4.2	−8.7	29.3
1976	2,826.7	71.5	124.4	158.1	600.6	357.4	243.2	257.1	454.4	403.1	367.7	357.7	5.6	−6.6	33.0
1977 [3]	2,958.6	73.3	145.5	157.1	664.8	403.3	261.5	271.2	433.7	417.9	399.6	363.0	.1	−4.9	37.4
1978	3,115.2	73.0	148.3	166.9	694.7	423.3	271.4	284.0	466.6	442.8	421.5	371.6	−2.8	6.3	42.1
1979	3,192.4	77.0	142.2	167.4	712.2	433.1	279.0	291.3	488.0	461.1	436.9	376.5	−1.4	−14.5	55.7
1980	3,187.1	76.4	143.5	153.3	673.9	408.5	265.5	294.0	481.8	468.9	450.9	382.8	5.9	.0	55.5
1981	3,248.8	87.4	145.7	150.3	678.6	408.6	269.9	293.9	499.1	476.1	463.0	385.4	4.4	9.9	55.2
1982	3,166.0	89.6	132.1	140.9	634.6	362.5	272.1	288.4	506.5	475.1	463.6	383.9	−.1	.0	51.2
1983	3,279.1	76.7	129.9	146.1	674.2	383.8	290.4	307.7	530.0	492.9	480.4	387.3	5.0	.9	47.9
1984	3,501.4	84.2	137.9	159.4	752.4	448.6	303.8	326.0	588.9	509.8	509.7	391.9	5.0	−7.8	43.9
1985	3,618.7	95.8	139.0	166.3	779.2	471.5	307.7	331.4	621.5	528.3	538.6	400.5	−4.3	−14.4	36.9
1986	3,717.9	103.6	128.3	174.6	803.2	482.7	320.5	342.4	662.2	535.6	565.8	407.9	−1.6	−34.5	30.5
1987	3,853.7	104.4	125.5	175.4	849.7	517.4	332.2	373.6	659.4	564.7	591.4	414.8	−4.1	−27.4	26.6
1988	4,024.4	94.5	127.3	176.9	927.5	583.2	344.3	392.0	693.9	583.7	613.9	422.2	−8.0	−27.7	28.1

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[1] Equals the statistical discrepancy in current dollars divided by the implicit price deflator for gross domestic business product.

[2] Equals GNP in constant dollars measured as the sum of expenditures less the statistical discrepancy in constant dollars less GNP in constant dollars measured as the sum of gross product originating by industry.

[3] Data for gross domestic product by industry beginning 1977 are based on a revised methodology and are not comparable with data for earlier years. For details, see *Survey of Current Business*, January 1991.

Note.—The industry classification is on an establishment basis and is based on the 1972 Standard Industrial Classification. Data in this table reflect the annual revisions of the national income and product accounts (NIPA) published in July 1989. Later this year, estimates will be published for 1987–89 consistent with the NIPA revisions of July 1990.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-12.—*Gross domestic product of nonfinancial corporate business, 1940–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross domestic product of nonfinancial corporate business	Capital consumption allowances with capital consumption adjustment	Net domestic product												
			Total	Indirect business tax, etc.[1]	Domestic income										
					Total	Compensation of employees	Corporate profits with inventory valuation and capital consumption adjustments								Net interest
							Total	Profits					Inventory valuation adjustment	Capital consumption adjustment	
								Profits before tax	Profits tax liability	Profits after tax					
										Total	Dividends	Undistributed profits			
1940	50.6	5.0	45.6	5.5	40.2	31.2	7.6	8.8	2.7	6.1	3.5	2.6	−.2	−1.0	1.4
1941	65.9	5.4	60.5	6.4	54.1	39.8	13.0	16.4	7.5	9.0	3.9	5.0	−2.5	−1.0	1.3
1942	83.3	6.0	77.3	6.8	70.5	51.0	18.2	20.1	11.2	8.9	3.7	5.2	−1.2	−.7	1.3
1943	99.1	6.1	93.0	7.3	85.7	62.2	22.4	23.6	13.8	9.8	3.9	5.8	−.8	−.4	1.1
1944	102.6	6.2	96.4	8.1	88.3	65.1	22.2	22.2	12.6	9.6	4.1	5.6	−.3	.3	1.0
1945	95.8	6.3	89.5	8.9	80.6	61.9	17.7	17.8	10.2	7.6	4.1	3.5	−.6	.5	1.0
1946	99.8	7.4	92.4	10.1	82.3	67.2	14.4	22.0	8.6	13.4	4.8	8.6	−5.3	−2.3	.7
1947	121.2	9.0	112.2	11.9	100.3	79.1	20.4	29.1	10.8	18.3	5.5	12.8	−5.9	−2.8	.8
1948	138.9	10.5	128.4	13.2	115.2	87.7	26.6	31.8	11.8	20.0	6.0	14.0	−2.2	−3.0	.9
1949	135.2	11.2	123.9	13.9	110.1	85.2	23.9	24.9	9.3	15.6	6.0	9.6	1.9	−2.9	1.0
1950	153.6	12.1	141.5	15.3	126.2	94.7	30.6	38.5	16.9	21.6	7.5	14.1	−5.0	−2.9	.9
1951	176.3	13.9	162.4	16.5	146.0	110.2	34.7	39.1	21.2	17.9	7.1	10.8	−1.2	−3.2	1.1
1952	184.0	14.9	169.1	18.0	151.1	118.2	31.7	33.8	17.8	16.0	7.1	8.8	1.0	−3.0	1.2
1953	196.6	15.9	180.7	19.2	161.5	128.6	31.5	34.9	18.5	16.4	7.3	9.1	−1.0	−2.4	1.3
1954	193.5	16.8	176.7	18.6	158.1	126.4	30.1	32.1	15.6	16.4	7.4	9.0	−.3	−1.6	1.6
1955	218.5	17.9	200.7	20.6	180.0	138.4	40.0	42.0	20.2	21.8	8.5	13.4	−1.7	−.3	1.6
1956	233.6	20.1	213.5	22.4	191.1	151.3	38.1	41.8	20.1	21.8	9.0	12.7	−2.7	−1.1	1.8
1957	244.1	22.1	221.9	23.7	198.2	159.0	37.0	39.8	19.1	20.7	9.3	11.4	−1.5	−1.2	2.2
1958	238.0	23.2	214.8	24.1	190.7	155.8	32.2	33.7	16.2	17.5	9.3	8.2	−.3	−1.2	2.7
1959	267.1	24.3	242.8	26.2	216.7	171.5	42.1	43.1	20.7	22.4	10.0	12.4	−.3	−.8	3.1
1960	277.6	25.3	252.4	28.5	223.9	181.2	39.2	39.7	19.2	20.5	10.6	9.9	−.2	−.2	3.5
1961	285.2	26.0	259.1	29.8	229.4	185.3	40.1	39.5	19.5	20.1	10.6	9.5	.3	.3	4.0
1962	311.1	27.0	284.2	32.2	252.0	200.1	47.3	44.2	20.6	23.5	11.4	12.2	.0	3.1	4.5
1963	331.1	28.2	303.0	34.2	268.7	211.1	52.8	48.9	22.8	26.2	12.6	13.5	.1	3.9	4.8
1964	357.7	29.6	328.0	36.8	291.2	226.7	59.3	55.4	24.0	31.4	13.7	17.7	−.5	4.4	5.3
1965	392.7	31.6	361.1	39.4	321.7	246.5	69.1	65.2	27.2	38.0	15.6	22.4	−1.2	5.2	6.1
1966	430.2	34.5	395.7	40.7	355.0	274.0	73.7	70.3	29.5	40.8	16.8	24.0	−2.1	5.5	7.4
1967	452.6	37.8	414.8	43.3	371.5	292.3	70.5	66.5	27.8	38.6	17.5	21.2	−1.6	5.5	8.8
1968	499.7	41.7	458.0	49.9	408.1	323.2	74.8	73.1	33.6	39.5	19.1	20.4	−3.7	5.3	10.1
1969	542.2	45.7	496.6	54.9	441.6	358.8	69.6	69.6	33.3	36.2	19.1	17.1	−5.9	5.9	13.2
1970	560.4	50.2	510.2	59.0	451.2	378.7	55.4	57.0	27.2	29.8	18.5	11.3	−6.6	5.0	17.1
1971	605.1	55.1	550.0	64.7	485.3	402.0	65.2	65.6	29.9	35.6	18.5	17.1	−4.6	4.2	18.1
1972	671.8	60.5	611.3	69.4	541.9	447.1	75.7	76.8	33.8	43.0	20.1	22.9	−6.6	5.5	19.2
1973	753.0	65.6	687.4	76.5	610.8	505.9	82.4	96.9	40.2	56.7	21.1	35.6	−20.0	5.6	22.5
1974	812.8	76.8	736.0	81.5	654.5	556.8	69.4	107.2	42.2	65.0	21.7	43.3	−39.5	1.7	28.3
1975	881.5	92.5	789.0	88.3	700.7	580.4	91.6	109.2	41.5	67.7	24.8	42.9	−11.0	−6.6	28.7
1976	995.5	103.0	892.5	95.4	797.1	656.3	113.3	138.3	53.0	85.4	27.8	57.6	−14.9	−10.2	27.5
1977	1,126.1	115.1	1,010.9	104.4	906.5	741.0	134.9	160.5	59.9	100.6	32.0	68.6	−16.6	−9.0	30.6
1978	1,274.1	130.8	1,143.3	114.1	1,029.2	847.4	146.0	182.1	67.1	115.0	37.2	77.8	−25.3	−10.9	35.9
1979	1,417.4	150.7	1,266.7	122.1	1,144.7	962.0	139.1	195.8	69.6	126.2	39.3	86.9	−43.2	−13.5	43.5
1980	1,540.8	172.5	1,368.2	138.5	1,229.7	1,051.1	123.1	181.8	67.0	114.8	45.5	69.3	−43.1	−15.5	55.5
1981	1,738.4	200.2	1,538.1	165.9	1,372.3	1,160.5	144.2	181.5	63.9	117.6	53.4	64.2	−24.2	−13.1	67.5
1982	1,782.2	223.0	1,559.3	166.9	1,392.4	1,203.9	111.9	129.7	46.3	83.4	59.7	23.7	−10.4	−7.5	76.6
1983	1,914.2	229.8	1,684.4	182.9	1,501.5	1,266.1	165.6	159.3	59.4	99.9	66.5	33.4	−10.9	17.1	69.8
1984	2,146.7	240.1	1,906.6	204.2	1,702.5	1,399.8	222.4	196.0	73.5	122.5	69.5	53.0	−5.8	32.1	80.3
1985	2,267.1	252.6	2,014.5	218.4	1,796.1	1,489.8	225.3	170.2	69.9	100.4	72.2	28.2	−1.7	56.7	81.1
1986	2,367.1	267.4	2,099.7	230.2	1,869.5	1,567.1	214.0	156.4	75.4	81.0	74.4	6.6	6.7	50.9	88.4
1987	2,524.8	281.9	2,243.0	240.2	2,002.8	1,663.6	246.0	217.2	93.3	123.9	81.8	42.1	−19.4	48.2	93.2
1988	2,720.7	297.6	2,423.1	257.5	2,165.6	1,801.6	266.0	251.1	102.2	148.9	80.8	68.1	−27.0	41.8	98.0
1989	2,854.5	317.8	2,536.7	272.9	2,263.8	1,902.3	241.0	241.5	101.4	140.1	104.8	35.2	−21.7	21.2	120.5
1990 p	2,954.6	331.6	2,623.0	289.8	2,333.2	1,983.3	221.4	232.8	97.6	135.2	115.3	19.8	−13.2	1.8	128.5
1982: IV	1,779.4	229.7	1,549.7	169.7	1,379.9	1,206.5	100.1	116.3	41.0	75.4	62.2	13.2	−13.4	−2.8	73.4
1983: IV	2,012.5	232.2	1,780.3	189.6	1,590.7	1,319.7	199.5	183.2	70.6	112.7	68.8	43.9	−8.1	24.4	71.5
1984: IV	2,201.8	245.0	1,956.7	210.6	1,746.1	1,436.8	222.1	181.9	66.4	115.5	68.6	46.9	−1.6	41.8	87.2
1985: IV	2,309.4	257.4	2,051.9	221.5	1,830.4	1,524.0	226.3	174.2	71.6	102.6	72.3	30.3	−6.6	58.7	80.1
1986: IV	2,408.7	273.6	2,135.2	232.7	1,902.5	1,597.9	211.7	172.9	84.4	88.5	75.2	13.3	−8.0	46.8	93.0
1987: IV	2,597.4	286.5	2,310.9	245.8	2,065.1	1,716.1	255.6	227.5	98.5	129.0	88.0	41.0	−21.1	49.1	93.4
1988: I	2,645.1	291.4	2,353.7	250.9	2,102.9	1,744.8	263.1	238.2	97.4	140.8	72.8	68.0	−21.8	46.7	94.9
II	2,700.5	295.2	2,405.3	255.1	2,150.2	1,786.2	268.1	254.1	104.4	149.7	77.3	72.4	−30.3	44.3	95.9
III	2,739.9	299.0	2,440.9	260.8	2,180.1	1,822.0	259.6	251.8	101.3	150.4	90.4	60.0	−33.3	41.1	98.5
IV	2,797.3	304.9	2,492.4	263.3	2,229.1	1,853.4	273.0	260.3	105.5	154.8	82.8	72.0	−22.5	35.1	102.7
1989: I	2,812.8	309.4	2,503.4	266.2	2,237.2	1,879.3	247.3	260.4	107.7	152.7	107.3	45.3	−43.0	29.9	110.5
II	2,847.5	313.0	2,534.6	271.1	2,263.5	1,895.3	248.6	246.4	101.6	144.9	101.3	43.6	−23.1	25.3	119.6
III	2,879.1	322.3	2,556.7	277.4	2,279.4	1,910.0	244.4	233.0	99.6	133.4	106.6	26.8	−6.1	17.5	125.0
IV	2,878.5	326.4	2,552.2	277.1	2,275.1	1,924.4	223.8	226.0	96.6	129.3	104.1	25.2	−14.5	12.3	126.9
1990: I	2,907.5	326.1	2,581.3	283.9	2,297.4	1,946.2	224.5	227.9	95.3	132.6	118.5	14.1	−11.4	8.1	126.6
II	2,960.0	329.1	2,630.9	284.2	2,346.8	1,982.1	235.8	232.2	97.5	134.7	112.3	22.4	−.5	4.1	128.9
III	2,979.1	333.4	2,645.7	293.6	2,352.1	2,004.7	218.8	239.1	100.3	138.8	115.5	23.3	−19.8	−.6	128.6
IV p		337.9		297.4		2,000.4					114.9		−21.2	−4.3	129.8

[1] Indirect business tax and nontax liability plus business transfer payments less subsidies.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–13.—*Output, costs, and profits of nonfinancial corporate business, 1948–90*

[Quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross domestic product of nonfinancial corporate business (billions of dollars)		Current-dollar cost and profit per unit of output (dollars) [1]								Output per hour of all employees (1982 dollars)	Compensation per hour of all employees (dollars)
			Total cost and profit [2]	Capital consumption allowances with capital consumption adjustment	Indirect business tax, etc. [3]	Compensation of employees	Corporate profits with inventory valuation and capital consumption adjustments			Net interest		
	Current dollars	1982 dollars					Total	Profits tax liability	Profits after tax [4]			
1948	138.9	538.9	0.258	0.019	0.025	0.163	0.049	0.022	0.027	0.002	....	....
1949	135.2	515.7	.262	.022	.027	.165	.046	.018	.028	.002	....	....
1950	153.6	570.4	.269	.021	.027	.166	.054	.030	.024	.002	....	....
1951	176.3	622.4	.283	.022	.026	.177	.056	.034	.022	.002	....	....
1952	184.0	637.3	.289	.023	.028	.185	.050	.028	.022	.002	....	....
1953	196.6	668.4	.294	.024	.029	.192	.047	.028	.020	.002	....	....
1954	193.5	650.8	.297	.026	.029	.194	.046	.024	.022	.002	....	....
1955	218.5	719.3	.304	.025	.029	.192	.056	.028	.028	.002	....	....
1956	233.6	747.0	.313	.027	.030	.203	.051	.027	.024	.002	....	....
1957	244.1	758.1	.322	.029	.031	.210	.049	.025	.024	.003	....	....
1958	238.0	725.2	.328	.032	.033	.215	.044	.022	.022	.004	12.771	2.743
1959	267.1	798.5	.335	.030	.033	.215	.053	.026	.027	.004	13.248	2.845
1960	277.6	820.8	.338	.031	.035	.221	.048	.023	.024	.004	13.422	2.962
1961	285.2	839.1	.340	.031	.035	.221	.048	.023	.025	.005	13.837	3.056
1962	311.1	904.8	.344	.030	.036	.221	.052	.023	.029	.005	14.349	3.174
1963	331.1	964.4	.343	.029	.035	.219	.055	.024	.031	.005	14.966	3.275
1964	357.7	1,029.0	.348	.029	.036	.220	.058	.023	.034	.005	15.519	3.419
1965	392.7	1,111.7	.353	.028	.035	.222	.062	.024	.038	.005	15.863	3.517
1966	430.2	1,189.5	.362	.029	.034	.230	.062	.025	.037	.006	16.116	3.712
1967	452.6	1,217.0	.372	.031	.036	.240	.058	.023	.035	.007	16.307	3.916
1968	499.7	1,286.5	.388	.032	.039	.251	.058	.026	.032	.008	16.753	4.209
1969	542.2	1,339.6	.405	.034	.041	.268	.052	.025	.027	.010	16.777	4.494
1970	560.4	1,325.2	.423	.038	.045	.286	.042	.021	.021	.013	16.828	4.808
1971	605.1	1,360.6	.445	.040	.048	.295	.048	.022	.026	.013	17.296	5.110
1972	671.8	1,461.1	.460	.041	.048	.306	.052	.023	.029	.013	17.662	5.404
1973	753.0	1,569.7	.480	.042	.049	.322	.053	.026	.027	.014	18.101	5.834
1974	812.8	1,533.4	.530	.050	.053	.363	.045	.028	.018	.018	17.620	6.398
1975	881.5	1,488.1	.592	.062	.059	.390	.062	.028	.034	.019	18.035	7.034
1976	995.5	1,583.5	.629	.065	.060	.414	.072	.033	.038	.017	18.372	7.615
1977	1,126.1	1,686.6	.668	.068	.062	.439	.080	.036	.044	.018	18.700	8.215
1978	1,274.1	1,789.8	.712	.073	.064	.473	.082	.037	.044	.020	18.831	8.916
1979	1,417.4	1,840.4	.770	.082	.066	.523	.076	.038	.038	.024	18.697	9.774
1980	1,540.8	1,807.9	.852	.095	.077	.581	.068	.037	.031	.031	18.591	10.809
1981	1,738.4	1,837.2	.946	.109	.090	.632	.078	.035	.044	.037	18.703	11.815
1982	1,782.2	1,782.2	1.000	.125	.094	.676	.063	.026	.037	.043	18.774	12.682
1983	1,914.2	1,886.0	1.026	.123	.098	.679	.089	.032	.057	.037	19.284	13.085
1984	2,146.7	2,036.5	1.054	.118	.100	.687	.109	.036	.073	.039	19.744	13.571
1985	2,267.1	2,117.4	1.071	.119	.103	.704	.106	.033	.073	.038	20.057	14.112
1986	2,367.1	2,173.9	1.089	.123	.106	.721	.098	.035	.064	.041	20.522	14.793
1987	2,524.8	2,290.2	1.102	.123	.105	.726	.107	.041	.067	.041	21.014	15.265
1988	2,720.7	2,403.7	1.132	.124	.107	.750	.111	.043	.068	.041	21.306	15.874
1989	2,854.5	2,431.2	1.174	.131	.112	.782	.099	.042	.057	.050	20.955	16.396
1990 p	2,954.6	2,429.5	1.216	.137	.119	.816	.091	.040	.051	.053	....	....
1982: IV	1,779.4	1,760.2	1.011	.131	.096	.685	.057	.023	.034	.042	18.793	12.881
1983: IV	2,012.5	1,940.5	1.037	.120	.098	.680	.103	.036	.066	.037	19.442	13.221
1984: IV	2,201.8	2,069.5	1.064	.118	.102	.694	.107	.032	.075	.042	19.792	13.741
1985: IV	2,309.4	2,137.7	1.080	.120	.104	.713	.106	.033	.072	.037	20.129	14.350
1986: IV	2,408.7	2,198.5	1.096	.124	.106	.727	.096	.038	.058	.042	20.662	15.017
1987: IV	2,597.4	2,339.4	1.110	.122	.105	.734	.109	.042	.067	.040	21.139	15.507
1988: I	2,645.1	2,373.9	1.114	.123	.106	.735	.111	.041	.070	.040	21.333	15.585
II	2,700.5	2,398.9	1.126	.123	.106	.745	.112	.044	.068	.040	21.323	15.781
III	2,739.9	2,413.2	1.135	.124	.108	.755	.108	.042	.066	.041	21.283	15.972
IV	2,797.3	2,428.6	1.152	.126	.108	.763	.112	.043	.069	.042	21.208	16.088
1989: I	2,812.8	2,427.8	1.159	.127	.110	.774	.102	.044	.058	.046	21.016	16.268
II	2,847.5	2,431.3	1.171	.129	.111	.780	.102	.042	.060	.049	20.961	16.339
III	2,879.1	2,443.9	1.178	.132	.113	.782	.100	.041	.059	.051	20.989	16.404
IV	2,878.5	2,421.8	1.189	.135	.114	.795	.092	.040	.052	.052	20.743	16.483
1990: I	2,907.5	2,423.1	1.200	.135	.117	.803	.093	.039	.053	.052	20.663	16.597
II	2,960.0	2,440.1	1.213	.135	.116	.812	.097	.040	.057	.053	20.760	16.863
III	2,979.1	2,435.1	1.223	.137	.121	.823	.090	.041	.049	.053	20.707	17.048

[1] Output is measured by gross domestic product of nonfinancial corporate business in 1982 dollars.

[2] This is equal to the deflator for gross domestic product of nonfinancial corporate business with the decimal point shifted two places to the left.

[3] Indirect business tax and nontax liability plus business transfer payments less subsidies.

[4] With inventory valuation and capital consumption adjustments.

Sources: Department of Commerce (Bureau of Economic Analysis) and Department of Labor (Bureau of Labor Statistics).

TABLE B-14.—*Personal consumption expenditures, 1940–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Personal consumption expenditures	Durable goods			Nondurable goods					Services					
		Total [1]	Motor vehicles and parts	Furniture and household equipment	Total [1]	Food	Clothing and shoes	Gasoline and oil	Fuel oil and coal	Total [1]	Housing [2]	Household operation		Transportation	Medical care
												Total [1]	Electricity and gas		
1940	71.0	7.8	2.8	3.8	37.0	20.2	7.5	2.3	1.5	26.2	9.7	4.0	1.5	2.1	2.2
1941	80.8	9.7	3.5	4.8	42.9	23.4	8.8	2.6	1.7	28.3	10.4	4.3	1.5	2.4	2.4
1942	88.6	6.9	.7	4.6	50.8	28.4	11.0	2.1	1.9	31.0	11.2	4.8	1.6	2.7	2.7
1943	99.5	6.5	.8	3.9	58.6	33.2	13.4	1.3	2.0	34.3	11.8	5.2	1.7	3.4	2.9
1944	108.2	6.7	.8	3.8	64.3	36.7	14.6	1.4	2.0	37.2	12.3	5.9	1.8	3.7	3.3
1945	119.6	8.0	1.0	4.5	71.9	40.6	16.5	1.8	2.2	39.7	12.8	6.4	1.9	4.0	3.6
1946	143.9	15.8	4.1	8.4	82.7	47.4	18.2	3.4	2.5	45.4	14.2	6.8	2.1	5.0	4.6
1947	161.9	20.4	6.6	10.6	90.9	52.3	18.8	4.0	3.0	50.6	16.0	7.5	2.3	5.3	5.6
1948	174.9	22.9	8.0	11.5	96.6	54.2	20.1	4.8	3.4	55.5	17.9	8.1	2.6	5.8	6.3
1949	178.3	25.0	10.6	11.3	94.9	52.5	19.3	5.3	3.1	58.4	19.6	8.5	2.9	5.9	6.5
1950	192.1	30.8	13.7	13.7	98.2	53.9	19.6	5.5	3.4	63.2	21.7	9.5	3.3	6.2	6.9
1951	208.1	29.9	12.2	14.1	109.2	60.7	21.3	6.1	3.5	69.0	24.3	10.4	3.7	6.8	7.4
1952	219.1	29.3	11.3	14.0	114.7	64.1	22.0	6.8	3.5	75.1	27.0	11.2	4.1	7.3	8.3
1953	232.6	32.7	13.9	14.7	117.8	65.4	22.2	7.4	3.4	82.1	29.9	12.1	4.5	8.0	9.3
1954	239.8	32.1	13.0	14.8	119.7	66.8	22.3	7.8	3.5	88.0	32.3	12.7	5.0	8.2	10.2
1955	257.9	38.9	17.8	16.4	124.7	68.6	23.3	8.6	3.8	94.3	34.4	14.2	5.5	8.5	10.8
1956	270.6	38.2	15.8	17.3	130.8	71.4	24.4	9.4	3.9	101.6	36.7	15.4	6.1	8.9	11.7
1957	285.3	39.7	17.3	17.2	137.1	75.1	24.5	10.2	4.1	108.5	39.3	16.3	6.5	9.4	12.8
1958	294.6	37.2	14.8	16.9	141.7	77.9	24.9	10.6	4.2	115.7	42.0	17.4	7.1	9.7	14.0
1959	316.3	42.8	18.9	18.1	148.5	80.7	26.4	11.3	4.0	125.0	45.0	18.7	7.6	10.5	15.3
1960	330.7	43.5	19.7	18.0	153.2	82.7	27.0	12.0	3.8	134.0	48.2	20.3	8.3	11.2	16.4
1961	341.1	41.9	17.8	18.3	157.4	84.8	27.6	12.0	3.8	141.8	51.2	21.2	8.8	11.7	17.5
1962	361.9	47.0	21.5	19.3	163.8	87.1	29.0	12.6	3.8	151.1	54.7	22.4	9.4	12.2	19.4
1963	381.7	51.8	24.4	20.7	169.4	89.5	29.8	13.0	4.0	160.6	58.0	23.6	9.9	12.7	21.0
1964	409.3	56.8	26.0	23.2	179.7	94.6	32.4	13.6	4.1	172.8	61.4	25.0	10.4	13.4	24.1
1965	440.7	63.5	29.9	25.1	191.9	101.0	34.1	14.8	4.4	185.4	65.4	26.5	10.9	14.5	25.9
1966	477.3	68.5	30.3	28.2	208.5	109.0	37.4	16.0	4.7	200.3	69.5	28.2	11.5	15.9	28.3
1967	503.6	70.6	30.0	30.0	216.9	112.3	39.2	17.1	4.8	216.0	74.1	30.1	12.2	17.3	31.1
1968	552.5	81.0	36.1	32.9	235.0	121.6	43.2	18.6	4.7	236.4	79.7	32.3	13.0	18.9	35.7
1969	597.9	86.2	38.4	34.7	252.2	130.5	46.5	20.5	4.6	259.4	86.8	35.0	14.0	20.9	40.9
1970	640.0	85.7	35.9	35.7	270.3	142.1	47.8	21.9	4.4	284.0	94.0	37.7	15.2	23.7	46.1
1971	691.6	97.6	44.9	37.8	283.3	147.5	51.7	23.2	4.6	310.7	102.7	40.9	16.6	27.1	51.8
1972	757.6	111.2	51.5	42.4	305.1	158.5	56.4	24.4	5.1	341.3	112.1	45.2	18.4	29.8	57.8
1973	837.2	124.7	56.7	47.9	339.6	176.1	62.5	28.1	6.3	373.0	123.1	49.6	20.0	31.2	64.4
1974	916.5	123.8	50.3	51.5	380.9	198.2	66.0	36.1	7.8	411.9	135.1	55.4	23.5	33.3	72.4
1975	1,012.8	135.4	55.8	54.5	416.2	218.7	70.8	39.7	8.4	461.2	148.4	63.5	28.5	35.7	84.2
1976	1,129.3	161.5	72.7	60.2	452.0	236.2	76.6	43.0	10.1	515.9	163.5	72.3	32.5	41.3	95.9
1977	1,257.2	184.5	85.4	67.1	490.4	255.9	84.1	46.9	11.1	582.3	182.4	81.7	37.6	49.2	111.5
1978	1,403.5	205.6	95.1	73.9	541.8	282.2	94.8	51.3	12.0	656.1	205.2	90.9	42.1	53.5	125.1
1979	1,566.8	219.0	96.9	82.1	613.2	317.3	102.2	66.1	15.8	734.6	231.1	100.3	46.8	59.0	141.4
1980	1,732.6	219.3	90.3	86.2	681.4	349.1	109.0	83.7	18.0	831.9	261.5	113.9	56.4	64.5	164.2
1981	1,915.1	239.9	100.5	92.7	740.6	376.5	119.9	92.7	19.4	934.7	295.6	127.5	63.5	68.3	193.5
1982	2,050.7	252.7	108.9	95.7	771.0	398.8	124.4	89.1	18.6	1,027.0	321.1	143.4	72.8	69.7	217.8
1983	2,234.5	289.1	130.4	107.1	816.7	421.9	135.1	90.2	17.5	1,128.7	344.1	156.0	80.0	74.8	238.3
1984	2,430.5	335.5	157.4	118.8	867.3	448.5	146.7	90.0	17.8	1,227.6	371.3	166.9	84.8	82.0	265.3
1985	2,629.0	372.2	179.1	129.9	911.2	471.6	156.4	90.6	18.5	1,345.6	403.0	175.3	88.9	89.8	291.5
1986	2,797.4	406.0	196.2	139.7	942.0	500.0	166.8	73.5	16.6	1,449.5	434.2	179.6	87.3	96.6	318.4
1987	3,009.4	423.4	197.9	148.8	1,001.3	530.7	178.4	75.3	17.2	1,584.7	468.9	185.9	88.6	106.5	357.3
1988	3,238.2	457.5	212.2	161.8	1,060.0	562.6	191.1	77.3	17.2	1,720.7	502.3	197.4	93.6	118.0	398.4
1989	3,450.1	474.6	215.5	171.4	1,130.0	595.3	204.6	83.8	17.7	1,845.5	533.9	206.3	97.7	126.4	434.3
1990 *p*	3,658.1	481.6	213.2	176.8	1,194.2	624.9	213.3	93.7	18.6	1,982.3	569.5	210.6	95.6	136.7	483.4
1982: IV	2,117.0	263.8	115.7	99.1	786.6	407.0	126.5	89.8	18.2	1,066.5	330.3	148.0	74.8	71.1	226.9
1983: IV	2,315.8	310.0	144.4	112.4	837.9	430.8	141.1	91.9	18.1	1,167.9	353.8	161.4	84.1	77.6	246.9
1984: IV	2,493.4	346.7	162.3	122.7	879.6	456.1	149.8	89.0	16.8	1,267.1	382.2	169.3	86.3	84.5	275.3
1985: IV	2,700.4	373.2	173.8	134.7	932.7	482.5	160.6	91.0	19.7	1,394.5	416.2	179.0	90.2	92.1	304.3
1986: IV	2,868.5	422.0	201.1	143.8	952.1	511.9	168.7	66.0	16.0	1,494.4	446.1	180.9	87.0	99.8	330.9
1987: IV	3,079.1	427.4	198.9	151.1	1,019.9	539.0	182.2	77.3	17.6	1,631.8	483.4	187.8	88.8	111.1	370.7
1988: I	3,147.7	448.9	212.2	156.2	1,029.8	545.7	184.2	75.6	17.7	1,668.9	491.9	192.6	92.0	112.7	381.2
II	3,204.3	453.7	211.0	161.2	1,049.1	557.4	187.8	76.6	17.1	1,701.5	497.8	195.3	92.5	117.6	392.4
III	3,268.2	454.2	207.8	163.0	1,073.2	570.4	193.6	78.4	17.2	1,740.7	505.9	200.3	94.7	120.1	405.6
IV	3,332.6	473.1	217.8	166.8	1,088.0	577.1	198.6	78.5	16.9	1,771.5	513.8	201.5	95.2	121.6	414.6
1989: I	3,371.7	466.4	211.3	170.2	1,106.7	588.8	199.3	79.0	16.1	1,798.6	520.3	202.8	95.6	124.3	422.4
II	3,425.9	473.6	216.2	170.7	1,127.1	592.5	203.4	88.2	17.0	1,825.1	527.8	202.6	95.1	125.2	428.7
III	3,484.3	487.1	226.9	171.5	1,137.3	597.6	206.9	84.5	17.4	1,859.8	538.2	205.7	97.2	127.4	435.6
IV	3,518.5	471.2	207.5	173.0	1,148.8	602.2	208.7	83.5	20.1	1,898.5	549.5	214.2	103.0	128.8	450.6
1990: I	3,588.1	492.1	221.1	178.9	1,174.7	616.4	212.9	87.1	17.7	1,921.3	556.3	205.2	92.5	132.3	462.6
II	3,622.7	478.4	212.4	176.8	1,179.0	623.3	212.6	84.5	17.4	1,965.3	563.6	211.9	97.5	135.2	475.8
III	3,693.4	482.3	214.7	176.4	1,205.0	629.8	215.8	94.0	19.6	2,006.2	575.8	212.7	96.4	137.4	491.5
IV *p*	3,728.1	473.5	204.7	175.1	1,218.3	629.9	212.0	109.1	19.5	2,036.3	582.1	212.6	96.1	142.1	503.8

[1] Includes other items not shown separately.

[2] Includes imputed rental value of owner-occupied housing.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-15.—*Personal consumption expenditures in 1982 dollars, 1940–90*

[Billions of 1982 dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Personal consumption expenditures	Durable goods			Nondurable goods					Services					
		Total[1]	Motor vehicles and parts	Furniture and household equipment	Total[1]	Food	Clothing and shoes	Gasoline and oil	Fuel oil and coal	Total[1]	Housing[2]	Household operation		Transportation	Medical care
												Total[1]	Electricity and gas		
1940	502.6	40.6	18.6	17.6	259.4	150.6	36.3	17.2	23.8	202.7	53.6	32.4	7.1	17.7	21.6
1941	531.1	46.2	20.6	20.4	275.6	158.3	38.9	19.2	24.6	209.3	56.0	32.0	7.3	19.7	22.4
1942	527.6	31.3	8.4	17.4	279.1	161.8	40.3	14.5	25.3	217.2	58.1	33.4	7.9	21.9	23.7
1943	539.9	28.1	7.7	14.0	284.7	166.3	43.0	9.2	25.7	227.2	59.8	31.2	8.2	26.9	24.1
1944	557.1	26.3	7.1	12.4	297.9	178.5	41.7	9.5	25.5	232.9	61.9	31.5	8.6	29.2	25.9
1945	592.7	28.7	7.4	13.7	323.5	193.0	43.4	12.5	27.2	240.5	62.6	32.4	9.2	31.0	26.5
1946	655.0	47.8	15.2	22.9	344.2	202.2	44.7	22.7	29.2	262.9	67.2	35.1	10.3	35.9	31.1
1947	666.6	56.5	21.8	25.7	337.4	193.9	42.5	24.1	30.8	272.6	72.8	37.6	11.7	35.3	33.8
1948	681.8	61.7	25.5	27.1	338.7	191.5	42.7	25.7	31.0	281.4	76.5	39.0	12.8	35.1	36.7
1949	695.4	67.8	32.7	26.4	342.3	193.6	43.0	27.9	27.3	285.3	80.9	40.1	13.7	33.2	37.8
1950	733.2	80.7	41.3	30.1	352.8	196.6	44.3	29.0	29.4	299.8	86.1	43.8	15.6	32.4	40.1
1951	748.7	74.7	36.3	28.9	362.9	202.5	43.7	31.5	29.3	311.1	91.9	46.2	17.6	33.2	42.0
1952	771.4	73.0	34.1	28.9	376.6	209.8	45.8	34.1	28.5	321.9	97.5	47.0	19.0	33.4	44.2
1953	802.5	80.2	39.9	29.9	388.2	217.7	46.2	36.0	27.6	334.1	102.5	48.9	20.4	34.2	46.6
1954	822.7	81.5	40.6	30.1	393.8	222.0	46.2	37.1	28.1	347.4	107.1	50.5	22.4	33.3	49.5
1955	873.8	96.9	51.5	33.7	413.2	231.3	48.6	40.3	29.9	363.6	112.1	55.5	24.2	34.2	51.0
1956	899.8	92.8	45.3	34.9	426.9	238.8	49.7	42.8	29.9	380.1	117.1	59.3	26.4	35.6	53.9
1957	919.7	92.4	45.8	33.7	434.7	243.5	49.3	44.4	29.7	392.6	122.6	61.2	28.0	36.2	56.8
1958	932.9	86.9	40.8	33.2	439.9	243.5	49.9	46.5	30.8	406.1	127.7	63.3	29.5	35.4	60.5
1959	979.4	96.9	47.4	35.5	455.8	252.1	52.3	48.9	29.4	426.7	133.6	65.7	31.2	36.8	64.0
1960	1,005.1	98.0	49.2	34.9	463.3	255.5	52.7	50.7	28.5	443.9	139.8	68.7	32.9	37.9	66.5
1961	1,025.2	93.6	44.6	35.3	470.1	259.7	53.7	51.0	26.7	461.4	145.7	70.9	34.6	38.2	69.1
1962	1,069.0	103.0	51.0	37.4	484.2	263.7	56.0	53.2	26.7	481.8	153.0	74.4	37.1	39.6	74.3
1963	1,108.4	111.8	56.4	39.9	494.3	266.5	56.9	54.7	28.0	502.3	159.4	77.0	38.8	41.2	79.1
1964	1,170.6	120.8	59.0	44.7	517.5	277.2	61.5	57.4	29.5	532.3	166.1	80.5	40.8	43.4	88.0
1965	1,235.4	134.6	67.5	48.5	543.2	290.4	64.0	60.2	31.0	558.5	174.4	83.9	42.7	45.5	91.4
1966	1,298.9	144.4	68.5	53.8	569.3	299.4	68.3	63.9	31.8	585.3	181.7	87.7	44.9	48.3	95.2
1967	1,337.7	146.2	67.4	55.8	579.2	304.0	68.8	66.0	31.8	612.3	189.3	91.9	47.4	51.4	98.3
1968	1,405.9	161.6	77.3	59.2	602.4	317.0	71.7	70.6	30.1	641.8	197.9	95.1	49.7	54.7	105.2
1969	1,456.7	167.8	80.4	60.9	617.2	324.3	73.0	75.2	28.6	671.7	207.6	99.3	52.4	58.1	113.6
1970	1,492.0	162.5	73.5	61.1	632.5	334.5	72.0	79.9	26.7	697.0	216.1	102.2	54.4	59.8	120.4
1971	1,538.8	178.3	86.4	63.5	640.3	335.9	75.3	83.6	25.9	720.2	224.5	103.6	55.8	62.1	128.2
1972	1,621.9	200.4	98.3	70.2	665.5	344.2	80.3	87.0	28.6	756.0	235.5	108.6	58.5	66.0	136.0
1973	1,689.6	220.3	106.7	77.9	683.2	340.8	86.0	91.7	30.9	786.1	246.5	112.6	59.8	67.8	145.4
1974	1,674.0	204.9	90.3	78.2	666.1	336.6	84.9	87.2	24.3	803.1	258.6	112.8	60.2	68.4	151.3
1975	1,711.9	205.6	91.1	75.9	676.5	346.4	88.1	89.8	24.2	829.8	265.7	117.5	63.3	69.4	159.9
1976	1,803.9	232.3	109.6	80.6	708.8	363.6	92.2	93.4	27.0	862.8	273.2	122.3	65.5	72.6	167.8
1977	1,883.9	253.9	121.2	87.3	731.4	377.1	97.4	96.4	26.1	898.5	279.6	128.2	68.1	77.8	177.8
1978	1,961.0	267.4	125.9	92.3	753.7	379.6	107.1	100.9	26.9	939.8	292.8	134.0	70.7	80.2	184.8
1979	2,004.4	266.5	119.4	97.1	766.6	387.5	112.1	97.1	26.2	971.2	304.1	138.3	71.1	82.9	192.2
1980	2,000.4	245.9	103.8	95.4	762.6	394.9	114.8	68.4	21.6	991.9	312.5	142.6	73.1	77.4	200.6
1981	2,024.2	250.8	106.3	96.5	764.4	392.5	122.2	87.8	19.2	1,009.0	318.9	142.0	72.0	73.3	212.0
1982	2,050.7	252.7	108.9	95.7	771.0	398.8	124.4	89.1	18.6	1,027.0	321.1	143.4	72.8	69.7	217.8
1983	2,146.0	283.1	126.8	106.1	800.2	414.0	132.6	93.2	18.6	1,062.7	325.4	146.2	74.2	71.4	222.3
1984	2,249.3	323.1	148.0	118.4	825.9	422.8	142.2	94.5	18.5	1,100.3	333.0	148.8	75.4	75.9	232.0
1985	2,354.8	355.1	164.4	131.0	847.4	435.5	147.2	94.4	19.6	1,152.3	341.7	151.6	77.5	82.1	240.9
1986	2,446.4	384.4	176.2	142.9	878.1	447.1	157.4	97.5	22.0	1,183.8	348.2	151.9	76.5	86.2	251.5
1987	2,515.8	391.4	171.1	151.6	892.7	454.0	160.7	95.8	22.4	1,231.6	358.2	156.8	78.9	89.5	266.9
1988	2,606.5	418.2	182.1	165.0	909.4	462.2	165.0	97.4	22.4	1,278.9	366.0	164.1	82.8	94.3	279.3
1989	2,656.8	428.0	181.4	175.0	919.9	462.9	172.7	96.7	21.9	1,309.0	372.1	167.6	84.1	96.9	286.1
1990 ^{p}	2,682.2	428.4	177.8	179.8	911.5	457.5	172.7	94.7	19.2	1,342.2	377.1	167.1	80.8	100.3	301.7
1982: IV	2,078.7	262.0	115.0	98.4	778.6	404.6	126.2	89.7	17.6	1,038.1	322.1	143.1	71.6	69.1	220.7
1983: IV	2,191.9	300.5	138.1	111.1	812.7	418.2	137.4	94.4	19.4	1,078.6	328.2	149.4	76.9	72.6	224.6
1984: IV	2,281.1	333.1	151.6	122.7	831.2	426.2	143.5	94.7	18.0	1,116.8	335.8	148.9	75.7	79.0	235.7
1985: IV	2,386.9	356.4	158.9	136.6	858.3	441.0	149.9	94.5	20.5	1,172.2	344.4	153.9	79.1	83.8	245.2
1986: IV	2,477.8	397.5	178.4	147.7	883.5	448.7	158.0	97.7	23.3	1,196.8	351.0	153.3	77.6	87.4	256.5
1987: IV	2,534.2	392.6	170.3	154.2	895.2	455.8	161.2	95.2	22.2	1,246.4	361.5	157.9	79.2	90.5	271.8
1988: I	2,576.8	412.4	182.7	159.8	900.9	458.4	162.2	96.2	22.9	1,263.5	363.8	162.0	82.1	92.4	274.9
II	2,594.1	416.2	182.0	164.4	905.3	462.2	161.7	97.5	21.9	1,272.6	365.5	162.7	82.2	94.0	277.3
III	2,616.4	415.1	178.2	166.2	914.4	464.0	167.6	97.2	22.3	1,286.8	366.8	166.4	84.1	95.0	281.3
IV	2,638.8	429.0	185.5	169.7	917.1	464.2	168.5	98.4	22.6	1,292.8	367.8	165.2	82.9	95.8	283.6
1989: I	2,636.7	422.4	178.6	173.7	918.5	466.4	168.2	97.9	20.8	1,295.8	369.1	165.2	82.7	95.5	284.6
II	2,645.3	428.2	181.8	175.5	914.6	461.9	170.8	95.7	21.4	1,302.5	371.1	164.7	81.9	96.2	284.7
III	2,675.3	438.1	191.1	175.0	923.4	463.0	176.6	95.5	21.8	1,313.8	373.0	167.7	84.3	97.5	285.7
IV	2,669.9	423.1	174.1	175.7	923.0	460.3	175.1	97.5	23.8	1,323.8	375.2	172.7	87.7	98.4	289.3
1990: I	2,677.3	437.6	183.9	181.4	915.6	457.4	174.2	96.2	18.6	1,324.2	376.3	162.8	77.7	98.8	294.7
II	2,678.8	426.8	177.8	180.0	911.2	459.3	171.3	93.9	20.4	1,340.8	376.9	168.5	82.4	99.7	299.3
III	2,696.8	429.5	179.6	179.7	916.4	459.4	174.4	94.4	21.0	1,350.8	377.2	170.1	82.7	100.9	304.6
IV ^{p}	2,675.8	419.9	170.0	178.1	902.8	454.0	171.0	94.3	16.8	1,353.1	378.1	167.1	80.2	102.0	308.1

[1] Includes other items not shown separately.

[2] Includes imputed rental value of owner-occupied housing.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-16.—*Gross and net private domestic investment, 1929–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross private domestic investment	Less: Capital consumption allowances with capital consumption adjustment	Equals: Net private domestic investment						
			Total	Net fixed investment					Change in business inventories
				Total	Nonresidential			Residential	
					Total	Structures	Producers' durable equipment		
1929	16.7	9.9	6.7	5.0	3.3	1.8	1.4	1.7	1.7
1933	1.6	7.6	−6.1	−4.5	−3.5	−1.7	−1.8	−1.0	−1.6
1939	9.5	9.0	.5	.1	−.7	−1.1	.4	.8	.42
1940	13.4	9.4	4.1	1.9	.7	−.8	1.5	1.2	2.2
1941	18.3	10.3	8.0	3.5	2.0	−.3	2.3	1.5	4.5
1942	10.3	11.3	−1.0	−2.7	−2.1	−1.7	−.5	−.6	1.8
1943	6.2	11.6	−5.3	−4.7	−3.1	−2.4	−.7	−1.6	−.6
1944	7.7	12.0	−4.2	−3.2	−1.3	−1.9	.5	−1.9	−1.0
1945	11.3	12.4	−1.1	−.1	1.7	−1.0	2.8	−1.8	−1.0
1946	31.5	14.2	17.3	10.9	6.9	2.4	4.5	4.0	6.4
1947	35.0	17.6	17.5	17.9	10.7	1.9	8.7	7.3	−.5
1948	47.1	20.4	26.7	22.0	11.8	2.5	9.3	10.2	4.7
1949	36.5	22.0	14.5	17.6	8.7	2.2	6.5	8.9	−3.1
1950	55.1	23.6	31.5	24.6	10.3	2.8	7.5	14.4	6.8
1951	60.5	27.2	33.3	23.1	11.6	3.9	7.7	11.5	10.2
1952	53.5	29.2	24.4	21.3	10.1	3.8	6.4	11.2	3.1
1953	54.9	30.9	24.0	23.6	11.9	4.8	7.1	11.7	.4
1954	54.1	32.5	21.6	23.3	10.2	5.0	5.2	13.0	−1.6
1955	69.7	34.4	35.3	29.6	13.2	5.9	7.3	16.4	5.7
1956	72.7	38.1	34.6	29.9	15.6	7.9	7.7	14.4	4.6
1957	71.1	41.1	29.9	28.5	15.9	7.9	8.1	12.6	1.4
1958	63.6	42.8	20.8	22.3	9.6	6.3	3.2	12.7	−1.5
1959	80.2	44.6	35.5	29.8	12.1	6.4	5.7	17.7	5.8
1960	78.2	46.4	31.8	28.7	13.4	7.3	6.1	15.4	3.1
1961	77.1	47.8	29.4	27.0	11.9	7.3	4.6	15.1	2.4
1962	87.6	49.4	38.2	32.1	14.9	8.0	6.9	17.2	6.1
1963	93.1	51.4	41.8	35.9	16.0	7.9	8.1	19.9	5.8
1964	99.6	53.9	45.7	40.3	20.3	9.4	10.9	20.0	5.4
1965	116.2	57.4	58.8	48.9	29.3	13.2	16.1	19.6	9.9
1966	128.6	62.1	66.5	52.3	35.8	15.2	20.7	16.5	14.2
1967	125.7	67.4	58.3	48.0	32.3	14.4	18.0	15.7	10.3
1968	137.0	73.9	63.1	55.2	34.2	15.1	19.0	21.0	7.9
1969	153.2	81.4	71.8	62.0	39.8	17.4	22.4	22.2	9.8
1970	148.8	88.8	60.0	56.9	36.8	17.4	19.4	20.1	3.1
1971	172.5	97.5	74.9	67.2	34.5	16.8	17.7	32.7	7.8
1972	202.0	107.9	94.1	83.6	40.5	17.4	23.1	43.1	10.5
1973	238.8	118.1	120.7	101.1	56.2	21.7	34.4	45.0	19.6
1974	240.8	137.5	103.4	87.9	55.8	22.0	33.7	32.2	15.4
1975	219.6	161.8	57.8	63.4	37.5	15.6	21.9	25.9	−5.6
1976	277.7	179.2	98.4	82.4	40.9	16.0	24.8	41.6	16.0
1977	344.1	201.5	142.5	121.3	58.6	17.6	41.0	62.6	21.3
1978	416.8	229.9	186.9	158.3	82.2	25.0	57.2	76.1	28.6
1979	454.8	265.8	189.1	176.1	98.9	34.5	64.5	77.2	13.0
1980	437.0	303.8	133.1	141.5	88.9	39.4	49.5	52.6	−8.3
1981	515.5	347.8	167.7	143.7	98.6	51.7	46.9	45.0	24.0
1982	447.3	383.2	64.1	88.7	65.5	45.9	19.6	23.2	−24.5
1983	502.3	396.6	105.7	112.8	45.8	25.9	19.9	67.0	−7.1
1984	664.8	415.5	249.4	181.7	91.1	39.3	51.8	90.6	67.7
1985	643.1	437.2	205.9	194.5	102.1	45.8	56.3	92.4	11.3
1986	659.4	460.1	199.3	192.4	75.3	27.5	47.8	117.1	6.9
1987	699.5	487.0	212.6	184.3	65.8	16.8	49.0	118.4	28.3
1988	747.1	514.3	232.7	206.5	88.6	18.1	70.4	118.0	26.2
1989	771.2	554.4	216.8	188.5	84.0	16.8	67.2	104.5	28.3
1990 ^{p}	745.0	575.7	169.3	171.5					−2.2
1982: IV	409.6	393.2	16.4	76.3					−59.9
1983: IV	579.8	400.8	179.0	148.0					31.0
1984: IV	661.8	423.5	238.3	193.3					45.0
1985: IV	654.1	446.9	207.1	199.9					7.2
1986: IV	648.8	470.8	178.0	190.2					−12.2
1987: IV	741.4	496.7	244.7	189.0					55.7
1988: I	729.2	504.8	224.4	196.1					28.3
II	746.0	510.5	235.5	213.3					22.2
III	765.6	516.3	249.3	211.1					38.2
IV	747.5	525.7	221.8	205.6					16.2
1989: I	769.7	534.7	235.0	208.4					26.6
II	776.7	543.0	233.7	201.0					32.7
III	775.8	567.5	208.3	179.4					28.9
IV	762.7	572.5	190.2	165.2					25.0
1990: I	747.2	567.0	180.2	192.0					−11.8
II	759.0	571.1	187.9	174.5					13.4
III	759.7	579.3	180.4	171.4					9.0
IV ^{p}	714.0	585.2	128.8	148.4					−19.5

Source: Department of Commerce, Bureau of Economic Analysis.

Table B–17.—*Gross and net private domestic investment in 1982 dollars, 1929–90*

[Billions of 1982 dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross private domestic investment	Less: Capital consumption allowances with capital consumption adjustment	Equals: Net private domestic investment						
			Total	Net fixed investment					Change in business inventories
				Total	Nonresidential			Residential	
					Total	Structures	Producers' durable equipment		
1929	139.2	86.8	52.4	41.6	26.2	16.8	9.4	15.4	10.8
1933	22.7	86.5	−63.8	−53.0	−40.2	−24.3	−16.0	−12.8	−10.7
1939	86.0	84.4	1.6	−2.3	−10.1	−12.0	1.9	7.8	3.9
1940	111.8	84.9	26.9	12.5	1.5	−8.5	10.0	11.1	14.4
1941	138.8	86.3	52.5	24.7	12.0	−3.5	15.6	12.7	27.8
1942	76.7	86.9	−10.2	−22.1	−17.5	−15.9	−1.6	−4.6	12.0
1943	50.4	85.7	−35.3	−36.0	−24.4	−20.7	−3.8	−11.5	.7
1944	56.4	84.8	−28.4	−23.3	−10.5	−15.2	4.7	−12.8	−5.2
1945	76.5	85.4	−8.9	−.5	10.5	−8.3	18.8	−11.0	−8.4
1946	178.1	88.0	90.1	62.2	39.5	15.4	24.1	22.7	27.9
1947	177.9	91.8	86.1	87.1	52.6	11.7	40.9	34.5	−1.0
1948	208.2	96.8	111.4	99.1	54.3	14.3	40.0	44.8	12.3
1949	168.8	101.7	67.1	76.7	37.9	12.7	25.2	38.9	−9.7
1950	234.9	106.5	128.4	104.2	43.3	15.7	27.6	60.9	24.2
1951	235.2	111.8	123.3	92.5	46.9	18.8	28.1	45.6	30.8
1952	211.8	117.0	94.8	84.8	41.7	18.8	22.9	43.2	10.0
1953	216.6	122.1	94.4	91.7	47.0	22.9	24.1	44.7	2.8
1954	212.6	127.4	85.2	90.0	40.4	24.4	16.0	49.6	−4.8
1955	259.8	132.6	127.2	110.9	49.9	27.7	22.2	60.9	16.3
1956	257.8	138.3	119.5	106.5	54.9	32.5	22.4	51.6	12.9
1957	243.4	143.5	99.9	96.9	51.7	30.7	20.9	45.2	3.0
1958	221.4	147.7	73.7	77.1	31.5	24.8	6.6	45.6	−3.4
1959	270.3	151.9	118.4	101.9	38.5	25.0	13.6	63.4	16.5
1960	260.5	156.3	104.1	96.4	41.4	27.9	13.6	55.0	7.7
1961	259.1	160.6	98.4	91.2	37.3	28.1	9.3	53.8	7.3
1962	288.6	165.1	123.5	107.3	46.4	30.3	16.0	61.0	16.2
1963	307.1	170.3	136.8	120.1	49.2	29.1	20.1	70.9	16.6
1964	325.9	176.3	149.6	133.9	63.3	34.0	29.2	70.6	15.7
1965	367.0	183.7	183.4	158.1	90.4	46.2	44.2	67.7	25.2
1966	390.5	192.2	198.3	161.4	106.3	50.4	55.8	55.1	36.9
1967	374.4	201.1	173.4	144.6	93.6	45.9	47.7	50.9	28.8
1968	391.8	209.8	181.9	160.9	96.1	46.7	49.3	64.8	21.0
1969	410.3	219.8	190.5	165.3	103.1	49.7	53.4	62.2	25.1
1970	381.5	229.8	151.8	143.6	89.3	46.1	43.3	54.2	8.2
1971	419.3	239.5	179.8	160.2	76.1	40.4	35.7	84.1	19.6
1972	465.4	253.4	212.1	190.3	85.3	39.8	45.5	105.0	21.8
1973	520.8	263.6	257.1	217.1	116.5	46.8	69.8	100.6	40.0
1974	481.3	276.1	205.3	172.0	106.9	42.5	64.4	65.1	33.3
1975	383.3	287.0	96.3	109.1	60.8	27.9	32.9	48.3	−12.8
1976	453.5	297.3	156.2	134.1	61.8	27.3	34.6	72.2	22.1
1977	521.3	309.6	211.7	182.6	85.2	28.7	56.5	97.4	29.1
1978	576.9	323.7	253.3	216.5	111.6	37.2	74.3	104.9	36.8
1979	575.2	341.3	234.0	218.9	124.3	44.8	79.5	94.6	15.0
1980	509.3	356.1	153.2	160.1	101.3	47.2	54.1	58.7	−6.9
1981	545.5	369.7	175.8	152.0	105.5	56.0	49.4	46.5	23.9
1982	447.3	383.2	64.1	88.7	65.5	45.9	19.6	23.2	−24.5
1983	504.0	394.4	109.6	116.0	50.4	26.2	24.1	65.6	−6.4
1984	658.4	407.2	251.2	188.9	103.3	39.8	63.5	85.6	62.3
1985	637.0	426.7	210.3	201.2	116.1	41.9	74.2	85.1	9.1
1986	639.6	443.4	196.2	190.7	85.6	20.0	65.6	105.1	5.6
1987	669.0	460.8	208.2	185.4	82.4	11.4	71.1	103.0	22.8
1988	705.7	479.7	226.0	202.4	103.8	10.2	93.6	98.6	23.6
1989	716.9	506.0	210.8	187.1	102.1	8.1	94.0	84.9	23.8
1990[p]	690.3	519.7	170.6	171.7					−1.1
1982: IV	408.8	390.0	18.8	78.0					−59.3
1983: IV	577.2	397.9	179.3	152.3					27.0
1984: IV	655.7	413.5	242.2	200.5					41.7
1985: IV	648.0	435.3	212.7	205.0					7.7
1986: IV	615.2	450.0	165.2	186.0					−20.8
1987: IV	706.6	467.6	239.0	190.6					48.4
1988: I	698.4	472.4	226.0	195.0					31.0
II	705.1	477.3	227.8	210.9					16.9
III	723.0	482.1	240.9	208.3					32.6
IV	696.2	486.9	209.3	195.3					14.0
1989: I	717.0	491.8	225.2	199.1					26.1
II	719.1	496.9	222.2	196.7					25.5
III	722.3	515.6	206.7	182.1					24.6
IV	709.1	519.8	189.3	170.4					18.9
1990: I	700.7	512.5	188.2	190.4					−2.2
II	700.7	516.5	184.2	174.7					9.5
III	697.0	522.5	174.5	169.8					4.7
IV[p]	662.8	527.2	135.7	151.9					−16.3

Source: Department of Commerce, Bureau of Economic Analysis.

Table B-18.—*Inventories and final sales of business, 1946–90*

[Billions of dollars, except as noted; seasonally adjusted]

Quarter	Inventories [1]							Final sales [3]	Inventory-final sales ratio	
	Total [2]	Farm	Nonfarm						Total	Nonfarm [4]
			Total [2]	Manufacturing	Wholesale trade	Retail trade	Other			
Fourth quarter:										
1946	71.0	19.6	51.4	24.6	10.4	12.8	3.2	15.8	4.48	3.24
1947	80.3	21.0	59.3	29.0	11.1	14.5	4.1	18.4	4.36	3.22
1948	85.6	19.3	66.3	32.2	12.5	16.6	4.5	19.8	4.33	3.35
1949	77.5	16.7	60.8	28.6	12.5	15.4	3.9	19.7	3.94	3.09
1950	96.7	22.5	74.2	34.9	14.7	19.2	4.9	21.8	4.44	3.41
1951	109.4	24.9	84.5	43.1	15.6	19.7	5.5	24.9	4.40	3.40
1952	108.6	23.3	85.3	44.0	15.6	19.4	5.6	26.4	4.11	3.23
1953	109.6	22.0	87.6	46.0	15.8	20.0	5.2	27.5	3.98	3.18
1954	107.3	21.2	86.1	43.9	16.1	20.2	5.3	28.0	3.84	3.08
1955	114.6	19.9	94.7	48.3	17.6	22.8	5.4	30.2	3.80	3.14
1956	123.4	19.9	103.5	54.0	18.9	23.7	6.2	31.9	3.87	3.24
1957	127.0	21.2	105.8	54.3	19.2	25.0	6.6	33.3	3.82	3.18
1958	126.2	22.6	103.7	52.7	19.3	25.1	6.6	34.3	3.68	3.02
1959	131.7	22.1	109.6	55.2	21.0	26.2	7.2	36.2	3.64	3.03
1960	135.5	23.3	112.2	56.2	21.3	27.5	7.2	37.5	3.61	2.99
1961	137.2	23.8	113.4	57.2	21.8	27.0	7.4	39.5	3.47	2.87
1962	143.8	25.2	118.6	60.3	22.4	28.3	7.5	41.8	3.44	2.84
1963	149.6	25.7	123.8	62.2	23.9	29.6	8.0	44.5	3.36	2.78
1964	155.3	24.5	130.9	65.9	25.2	31.0	8.8	47.1	3.30	2.78
1965	169.1	28.0	141.0	70.7	26.9	33.7	9.8	52.1	3.24	2.70
1966	185.2	27.4	157.8	80.9	30.3	36.2	10.4	55.3	3.35	2.85
1967	197.4	27.9	169.5	87.5	32.7	36.9	12.4	58.8	3.36	2.88
1968	211.8	29.1	182.6	94.0	34.6	40.7	13.3	64.8	3.27	2.82
1969	232.4	31.8	200.6	103.4	37.9	44.5	14.9	68.8	3.38	2.91
1970	240.3	31.1	209.2	105.8	41.7	45.8	16.0	72.4	3.32	2.89
1971	257.8	35.4	222.4	107.3	45.2	52.3	17.6	78.9	3.27	2.82
1972	285.6	44.3	241.3	113.6	50.0	57.7	19.9	87.7	3.26	2.75
1973	352.6	65.5	287.1	136.1	59.4	66.4	25.2	96.8	3.64	2.97
1974	423.3	62.4	360.9	177.0	75.6	74.6	33.7	104.6	4.05	3.45
1975	428.8	64.3	364.5	177.8	76.2	74.7	35.8	117.1	3.66	3.11
1976	463.3	60.2	403.1	194.9	86.1	82.7	39.4	128.5	3.60	3.14
1977	505.7	59.3	446.4	210.6	96.2	93.3	46.3	143.9	3.51	3.10
1978	588.2	73.7	514.5	238.4	113.8	107.8	54.5	165.1	3.56	3.12
1979	674.8	80.7	594.1	281.1	133.7	117.0	62.3	183.2	3.68	3.24
1980	739.3	84.5	654.8	310.7	154.8	122.7	66.7	201.1	3.68	3.26
1981	789.0	81.6	707.4	330.2	164.7	134.0	78.5	217.8	3.62	3.25
1982	771.5	79.2	692.2	316.1	162.2	134.7	79.2	229.5	3.36	3.02
1983	787.2	79.4	707.8	315.9	163.8	148.2	79.9	247.0	3.19	2.87
1984	858.2	80.9	777.3	343.4	177.5	166.7	89.6	268.8	3.19	2.89
1985	863.5	71.5	792.1	333.5	181.0	180.9	96.6	290.3	2.97	2.73
1986	853.3	66.3	787.0	321.1	184.1	185.5	96.3	305.6	2.79	2.57
1987	918.9	65.5	853.4	343.8	199.1	208.2	102.3	325.2	2.83	2.62
1988	996.5	71.4	925.1	370.2	217.9	222,3	114.7	354.0	2.81	2.61
1989	1,050.8	77.9	972.9	382.7	226.6	238.0	125.6	371.5	2.83	2.62
1990 ᵖ	1,063.7	76.7	986.9	383.8	234.1	236.3	132.6	389.6	2.73	2.53
1988: I	933.9	66.4	867.5	349.5	205.4	207.9	104.6	332.9	2.80	2.61
II	956.4	70.4	886.0	356.6	210.0	212.2	107.1	341.1	2.80	2.60
III	978.4	73.3	905.1	362.5	215.3	217.1	110.2	345.8	2.83	2.62
IV	996.5	71.4	925.1	370.2	217.9	222.3	114.7	354.0	2.81	2.61
1989: I	1,018.1	74.5	943.6	377.2	219.7	228.5	118.2	359.2	2.83	2.63
II	1,028.1	74.9	953.2	379.3	222.5	231.1	120.3	364.2	2.82	2.62
III	1,036.5	74.5	962.0	383.1	223.8	232.0	123.1	368.4	2.81	2.61
IV	1,050.8	77.9	972.9	382.7	226.6	238.0	125.6	371.5	2.83	2.62
1990: I	1,049.4	79.4	970.0	382.5	227.3	231.6	128.6	380.3	2.76	2.55
II	1,049.3	79.1	970.2	377.8	228.2	234.5	129.6	383.3	2.74	2.53
III	1,070.1	77.3	992.8	390.2	233.2	237.0	132.5	387.5	2.76	2.56
IV ᵖ	1,063.7	76.7	986.9	383.8	234.1	236.3	132.6	389.6	2.73	2.53

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[1] Inventories at end of quarter. Quarter-to-quarter change calculated from this table is not the current-dollar change in business inventories (CBI) component of GNP. The former is the difference between two inventory stocks, each valued at their respective end-of-quarter prices. The latter is the change in the physical volume of inventories valued at average prices of the quarter. In addition, changes calculated from this table are at quarterly rates, whereas CBI is stated at annual rates.

[2] Beginning 1959, inventories of construction establishments are included in "other" nonfarm inventories. Prior to 1959, they are included in total and total nonfarm inventories, but not in the detailed categories shown.

[3] Quarterly totals at monthly rates. Business final sales equals final sales less gross product of households and institutions, government, and rest of the world, and includes a small amount of final sales by farms.

[4] Ratio based on total business final sales, which includes a small amount of final sales by farms.

Note.—The industry classification of inventories is on an establishment basis and is based on the 1972 Standard Industrial Classification (SIC) beginning 1948 and on the 1942 SIC prior to 1948.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–19.—*Inventories and final sales of business in 1982 dollars, 1947–90*

[Billions of 1982 dollars, except as noted; seasonally adjusted]

Quarter	Inventories [1]							Final sales [3]	Inventory-final sales ratio	
			Nonfarm							
	Total [2]	Farm	Total [2]	Manufacturing	Wholesale trade	Retail trade	Other		Total	Nonfarm [4]
Fourth quarter:										
1947	251.3	43.3	208.0	105.1	39.9	39.6	23.5	74.8	3.36	2.78
1948	263.5	45.4	218.1	108.6	42.7	43.7	23.1	77.1	3.42	2.83
1949	253.9	44.4	209.5	102.9	42.8	42.8	21.1	77.3	3.28	2.71
1950	278.1	47.7	230.4	109.8	47.6	49.5	23.4	82.6	3.37	2.79
1951	308.9	51.5	257.4	133.2	49.0	49.6	25.6	90.4	3.42	2.85
1952	318.9	54.6	264.3	139.0	50.0	49.6	25.8	93.9	3.40	2.81
1953	321.6	54.3	267.4	142.7	50.4	50.8	23.5	98.0	3.28	2.73
1954	316.9	55.9	260.9	135.0	51.1	51.2	23.6	97.7	3.24	2.67
1955	333.2	56.0	277.1	142.5	54.8	57.1	22.7	102.5	3.25	2.70
1956	346.1	53.7	292.4	153.2	56.6	57.8	24.8	104.7	3.31	2.79
1957	349.1	54.9	294.2	152.1	56.0	59.8	26.3	105.9	3.30	2.78
1958	345.7	57.3	288.4	146.8	56.0	59.4	26.3	107.7	3.21	2.68
1959	362.2	58.1	304.2	153.5	60.7	61.9	28.1	111.4	3.25	2.73
1960	370.0	59.4	310.5	154.7	61.8	65.2	28.8	114.1	3.24	2.72
1961	377.2	60.8	316.5	158.8	63.1	64.2	30.3	118.7	3.18	2.67
1962	393.4	63.5	329.9	167.2	65.0	67.5	30.1	123.4	3.19	2.67
1963	410.1	65.8	344.2	172.6	68.9	70.3	32.4	130.4	3.14	2.64
1964	425.8	64.0	361.8	180.9	72.6	73.4	34.9	136.3	3.12	2.65
1965	451.0	66.3	384.7	191.6	76.5	79.2	37.4	147.7	3.05	2.60
1966	487.9	66.1	421.7	213.6	85.1	84.3	38.7	150.2	3.25	2.81
1967	516.6	67.7	449.0	229.2	90.7	84.2	45.0	156.4	3.30	2.87
1968	537.7	68.2	469.4	239.0	93.5	90.5	46.5	163.7	3.28	2.87
1969	562.8	69.0	493.8	248.5	98.9	96.4	50.0	165.4	3.40	2.98
1970	571.1	69.8	501.2	248.3	105.8	96.6	50.5	166.8	3.42	3.00
1971	590.7	73.4	517.3	246.1	110.7	107.2	53.2	172.6	3.42	3.00
1972	612.4	75.9	536.6	251.7	114.0	114.0	56.9	185.4	3.30	2.89
1973	652.5	81.4	571.0	267.9	118.4	122.1	62.6	188.9	3.45	3.02
1974	685.7	81.3	604.5	288.5	128.4	121.1	66.4	184.3	3.72	3.28
1975	673.0	82.6	590.3	281.9	124.0	115.9	68.6	191.5	3.51	3.08
1976	695.1	79.1	616.1	294.0	131.2	122.3	68.5	199.3	3.49	3.09
1977	724.2	77.2	647.0	301.9	140.5	130.9	73.7	209.0	3.47	3.10
1978	761.0	77.8	683.2	314.1	151.6	139.1	78.4	221.5	3.44	3.08
1979	776.0	82.4	693.6	324.7	156.1	136.7	76.1	225.6	3.44	3.08
1980	769.1	77.8	691.4	326.8	161.6	130.4	72.7	225.3	3.41	3.07
1981	793.0	82.6	710.3	330.3	165.0	135.5	79.5	224.6	3.53	3.16
1982	768.4	81.2	687.2	315.2	161.5	132.9	77.6	226.1	3.40	3.04
1983	762.0	74.9	687.2	309.3	157.9	142.4	77.5	235.5	3.24	2.92
1984	824.2	79.4	744.8	330.0	171.0	157.8	86.0	248.4	3.32	3.00
1985	833.3	75.2	758.2	320.6	174.3	169.1	94.1	261.2	3.19	2.90
1986	838.9	72.8	766.1	315.5	180.6	171.2	98.8	269.7	3.11	2.84
1987	861.7	66.9	794.9	322.7	185.8	186.4	99.9	278.4	3.10	2.86
1988	885.4	63.9	821.4	329.8	192.4	192.4	106.8	291.3	3.04	2.82
1989	909.1	69.0	840.2	333.6	193.7	199.3	113.6	295.5	3.08	2.84
1990 p	908.1	70.9	837.2	331.2	195.5	193.4	117.1	298.9	3.04	2.80
1988: I	869.5	67.4	802.1	325.4	190.2	185.0	101.5	283.2	3.07	2.83
II	873.7	66.8	806.9	326.2	190.6	187.0	103.1	287.6	3.04	2.81
III	881.9	67.2	814.6	327.3	192.7	189.6	105.0	288.0	3.06	2.83
IV	885.4	63.9	821.4	329.8	192.4	192.4	106.8	291.3	3.04	2.82
1989: I	891.9	66.4	825.5	330.3	191.1	195.4	108.8	293.0	3.04	2.82
II	898.3	67.4	830.9	332.1	192.7	196.3	109.7	294.4	3.05	2.82
III	904.4	68.1	836.3	335.0	193.2	196.2	111.9	295.3	3.06	2.83
IV	909.1	69.0	840.2	333.6	193.7	199.3	113.6	295.5	3.08	2.84
1990: I	908.6	70.5	838.1	334.0	194.2	192.9	117.0	298.5	3.04	2.81
II	911.0	70.0	841.0	333.4	194.9	194.8	117.9	298.1	3.06	2.82
III	912.1	70.0	842.2	334.3	195.3	195.0	117.6	298.8	3.05	2.82
IV p	908.1	70.9	837.2	331.2	195.5	193.4	117.1	298.9	3.04	2.80

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[1] Inventories at end of quarter. Quarter-to-quarter changes calculated from this table are at quarterly rates, whereas the constant-dollar change in business inventories component of GNP is stated at annual rates.

[2] Beginning 1959, inventories of construction establishments are included in "other" nonfarm inventories. Prior to 1959, they are included in total and total nonfarm inventories, but not in the detailed categories shown.

[3] Quarterly totals at monthly rates. Business final sales equals final sales less gross product of households and institutions, government, and rest of world, and includes a small amount of final sales by farms.

[4] Ratio based on total business final sales, which includes a small amount of final sales by farms.

Note.—The industry classification of inventories is on an establishment basis and is based on the 1972 Standard Industrial Classification (SIC) beginning 1948 and on the 1942 SIC prior to 1948.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–20.—*Foreign transactions in the national income and product accounts, 1929–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Receipts from foreigners					Payments to foreigners								
	Total	Exports of goods and services			Capital grants received by the United States (net)	Total	Imports of goods and services			Transfer payments (net)			Interest paid by government to foreigners	Net foreign investment
		Total	Merchandise	Services			Total	Merchandise	Services	Total	From persons (net)	From government (net)		
1929	7.1	7.1	5.3	1.7		7.1	5.9	4.5	1.5	0.4	0.3	0.0	0.0	0.8
1933	2.4	2.4	1.7	.7		2.4	2.1	1.5	.6	.2	.2	.0	.0	.2
1939	4.6	4.6	3.3	1.3		4.6	3.4	2.4	1.0	.2	.2	.0	.0	1.0
1940	5.4	5.4	4.1	1.3		5.4	3.7	2.7	1.0	.2	.2	.0	.0	1.5
1941	6.1	6.1	4.5	1.6		6.1	4.7	3.4	1.3	.2	.2	.0	.0	1.3
1942	5.0	5.0	3.4	1.6		5.0	4.8	2.7	2.1	.2	.1	.1	.0	–.1
1943	4.6	4.6	2.9	1.7		4.6	6.5	3.4	3.1	.2	.2	–.1	.0	–2.1
1944	5.5	5.5	3.6	1.9		5.5	7.2	3.8	3.4	.3	.4	–.1	.0	–2.0
1945	7.4	7.4	5.4	2.1		7.4	7.9	3.9	4.0	.8	.5	.4	.0	–1.3
1946	15.2	15.2	11.8	3.4		15.2	7.3	5.1	2.3	2.9	.7	2.3	.0	4.9
1947	20.3	20.3	16.1	4.2		20.3	8.3	6.0	2.4	2.6	.7	2.0	.0	9.3
1948	17.5	17.5	13.3	4.3		17.5	10.6	7.6	3.0	4.5	.7	3.9	.0	2.4
1949	16.4	16.4	12.2	4.1		16.4	9.8	6.9	2.9	5.6	.5	5.1	.0	.9
1950	14.5	14.5	10.2	4.3		14.5	12.3	9.1	3.2	4.0	.4	3.6	.0	–1.8
1951	19.8	19.8	14.2	5.5		19.8	15.3	11.2	4.1	3.5	.4	3.1	.0	.9
1952	19.2	19.2	13.4	5.8		19.2	16.0	10.8	5.2	2.5	.4	2.1	.1	.6
1953	18.1	18.1	12.4	5.7		18.1	16.8	11.0	5.8	2.5	.5	2.0	.1	–1.3
1954	18.8	18.8	12.9	5.9		18.8	16.3	10.4	5.9	2.3	.5	1.8	.1	.2
1955	21.1	21.1	14.4	6.7		21.1	18.1	11.5	6.6	2.5	.4	2.1	.1	.4
1956	25.2	25.2	17.6	7.6		25.2	19.9	12.8	7.1	2.4	.5	1.9	.2	2.8
1957	28.2	28.2	19.6	8.7		28.2	20.9	13.3	7.6	2.3	.5	1.8	.2	4.8
1958	24.4	24.4	16.4	8.0		24.4	21.1	13.0	8.1	2.3	.4	1.8	.1	.9
1959	25.0	25.0	16.5	8.5		25.0	23.5	15.3	8.2	2.3	.4	1.9	.3	–1.2
1960	29.9	29.9	20.5	9.4		29.9	24.0	15.2	8.8	2.4	.4	1.9	.3	3.2
1961	31.1	31.1	20.9	10.1		31.1	23.9	15.1	8.8	2.7	.5	2.2	.3	4.2
1962	33.1	33.1	21.7	11.4		33.1	26.2	16.9	9.3	2.8	.5	2.3	.3	3.8
1963	35.7	35.7	23.3	12.3		35.7	27.5	17.7	9.7	2.9	.6	2.3	.4	4.9
1964	40.5	40.5	26.7	13.8		40.5	29.6	19.4	10.2	3.0	.7	2.3	.5	7.5
1965	42.9	42.9	27.8	15.1		42.9	33.2	22.2	11.0	3.0	.7	2.3	.5	6.2
1966	46.6	46.6	30.7	15.8		46.6	39.1	26.3	12.7	3.1	.7	2.4	.5	3.8
1967	49.5	49.5	32.2	17.3		49.5	42.1	27.8	14.4	3.3	.9	2.4	.6	3.5
1968	54.8	54.8	35.3	19.5		54.8	49.3	33.9	15.4	3.2	.9	2.3	.7	1.6
1969	60.4	60.4	38.3	22.1		60.4	54.7	36.8	17.9	3.2	1.0	2.2	.8	1.7
1970	69.8	68.9	44.5	24.4	0.9	69.8	60.5	40.9	19.6	3.5	1.2	2.3	1.0	4.8
1971	73.1	72.4	45.6	26.8	.7	73.1	66.1	46.6	19.5	3.9	1.2	2.7	1.8	1.3
1972	82.1	81.4	51.7	29.6	.7	82.1	78.2	56.9	21.3	4.1	1.1	2.9	2.7	–2.9
1973	114.1	114.1	73.9	40.2	0	114.1	97.3	71.8	25.5	4.1	1.3	2.9	3.8	8.8
1974	149.5	151.5	101.0	50.5	–2.0	149.5	135.2	104.5	30.7	4.6	1.0	3.6	4.3	5.4
1975	161.3	161.3	109.6	51.7	0	161.3	130.3	99.0	31.3	4.9	1.0	4.0	4.5	21.6
1976	177.7	177.7	117.5	60.2	0	177.7	158.9	124.3	34.6	5.4	1.0	4.4	4.5	9.0
1977	191.6	191.6	123.1	68.6	0	191.6	189.7	151.9	37.9	5.1	.9	4.2	5.5	–8.7
1978	227.5	227.5	144.7	82.8	0	227.5	223.4	176.5	46.9	5.6	.9	4.7	8.7	–10.1
1979	292.4	291.2	183.3	107.9	1.1	292.4	272.5	211.9	60.5	6.2	1.0	5.2	11.1	2.6
1980	352.1	351.0	225.1	125.9	1.2	352.1	318.9	247.5	71.4	7.7	1.1	6.5	12.6	13.0
1981	383.9	382.8	238.3	144.5	1.1	383.9	348.9	266.5	82.4	7.5	1.0	6.5	16.9	10.6
1982	361.9	361.9	214.0	148.0	0	361.9	335.6	249.5	86.1	9.0	1.3	7.8	18.3	–1.0
1983	352.5	352.5	206.1	146.4	0	352.5	358.7	271.3	87.3	9.5	1.0	8.5	17.8	–33.5
1984	383.5	383.5	224.1	159.4	0	383.5	442.4	334.3	108.2	12.3	1.5	10.7	19.8	–90.9
1985	370.9	370.9	220.8	150.1	0	370.9	448.9	340.9	108.0	15.1	1.7	13.4	21.3	–114.4
1986	396.5	396.5	224.4	172.0	0	396.5	493.8	367.8	126.1	15.9	1.9	13.9	22.6	–135.8
1987	449.6	449.6	256.0	193.6	0	449.6	564.3	412.6	151.8	14.6	2.2	12.4	25.3	–154.6
1988	552.0	552.0	324.2	227.8	0	552.0	626.1	450.1	175.9	15.0	1.9	13.1	30.2	–119.2
1989	626.2	626.2	369.9	256.3	0	626.2	672.3	480.9	191.4	14.8	1.4	13.4	36.0	–96.8
1990 p	670.4	670.4	397.9	272.5	0	670.4	708.4	505.4	203.0	13.4	.9	12.5	38.7	–90.1
1982: IV	335.9	335.9	196.3	139.6	0	335.9	321.9	239.9	82.0	10.6	1.1	9.5	18.9	–15.4
1983: IV	364.7	364.7	215.6	149.1	0	364.7	390.5	298.3	92.2	13.4	1.2	12.2	18.3	–57.4
1984: IV	385.7	385.7	228.0	157.7	0	385.7	453.6	342.7	110.9	17.0	1.6	15.5	21.2	–106.1
1985: IV	369.2	369.2	217.7	151.5	0	369.2	472.4	361.4	111.0	16.9	1.4	15.5	21.5	–141.6
1986: IV	402.4	402.4	230.4	172.0	0	402.4	511.3	381.8	129.5	16.6	2.1	14.5	22.9	–148.5
1987: IV	485.8	485.8	281.3	204.4	0	485.8	600.7	437.3	163.4	18.9	2.1	16.8	25.8	–159.7
1988: I	525.7	525.7	306.7	219.1	0	525.7	607.8	439.7	168.0	13.8	2.1	11.7	27.7	–123.5
II	540.4	540.4	319.2	221.2	0	540.4	614.7	442.2	172.6	12.3	1.8	10.5	29.5	–116.1
III	558.7	558.7	327.9	230.7	0	558.7	628.3	450.4	177.9	13.9	1.6	12.3	31.3	–114.8
IV	583.1	583.1	342.8	240.3	0	583.1	653.5	468.2	185.3	20.0	1.9	18.1	32.2	–122.5
1989: I	609.7	609.7	360.6	249.1	0	609.7	658.2	470.3	187.9	14.3	1.7	12.6	34.8	–97.6
II	628.8	628.8	373.2	255.5	0	628.8	680.0	482.1	198.0	12.1	1.6	10.5	35.7	–99.1
III	623.7	623.7	367.3	256.5	0	623.7	673.0	483.2	189.8	14.2	1.2	13.0	36.2	–99.7
IV	642.8	642.8	378.7	264.1	0	642.8	678.1	488.0	190.1	18.5	1.2	17.3	37.1	–90.9
1990: I	661.3	661.3	394.2	267.1	0	661.3	691.3	497.8	193.5	14.0	.9	13.1	37.6	–81.6
II	659.7	659.7	395.0	264.7	0	659.7	684.6	484.1	200.5	19.4	.4	18.9	38.7	–82.9
III	672.7	672.7	393.5	279.3	0	672.7	714.1	508.1	206.0	18.3	1.3	17.0	39.0	–98.7
IV p	687.7	687.7	408.8	279.0	0	687.7	743.7	531.8	211.9	2.1	1.1	1.0	39.3	–97.3

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–21.—*Exports and imports of goods and services in 1982 dollars, 1929–90*

[Billions of 1982 dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Exports of goods and services							Imports of goods and services						
	Total	Merchandise			Services			Total	Merchandise			Services		
		Total	Durable goods	Nondurable goods	Total	Factor income [1]	Other		Total	Durable goods	Nondurable goods	Total	Factor income [1]	Other
1929	42.1	29.7	12.3	17.5	12.3	7.6	4.8	37.4	29.3	7.4	22.0	8.0	2.6	5.4
1933	22.7	15.9	4.5	11.4	6.8	3.7	3.1	24.2	19.2	4.0	15.2	4.9	1.3	3.6
1939	36.2	26.5	13.3	13.1	9.8	5.2	4.5	30.1	24.0	6.9	17.0	6.1	2.2	4.0
1940	40.0	30.5	18.9	11.6	9.4	4.6	4.8	31.7	25.6	8.8	16.8	6.2	2.0	4.1
1941	42.0	31.7	20.2	11.6	10.3	5.2	5.1	38.2	29.4	11.0	18.4	8.8	1.9	6.9
1942	29.1	19.5	13.4	6.1	9.6	4.8	4.9	36.9	21.0	6.7	14.3	15.8	1.7	14.2
1943	25.1	15.2	10.5	4.8	9.8	4.6	5.2	48.0	25.0	6.5	18.5	23.0	1.9	21.2
1944	27.3	16.4	11.0	5.4	10.9	4.9	6.0	51.1	26.5	6.7	19.7	24.6	2.1	22.5
1945	35.2	24.0	12.6	11.3	11.2	4.8	6.5	54.1	26.0	6.9	19.1	28.2	2.5	25.7
1946	69.0	54.1	23.1	31.0	14.9	5.6	9.4	42.0	30.0	7.8	22.2	12.0	1.9	10.1
1947	82.3	65.5	34.4	31.1	16.9	7.2	9.7	39.9	29.3	7.8	21.5	10.6	2.1	8.5
1948	66.2	49.1	24.5	24.6	17.1	8.5	8.6	47.1	33.9	9.4	24.5	13.1	2.3	10.8
1949	65.0	48.4	24.1	24.2	16.7	8.2	8.5	46.2	33.3	8.9	24.4	13.0	2.6	10.4
1950	59.2	42.2	21.0	21.3	17.0	9.1	7.9	54.6	40.9	11.5	29.5	13.6	2.8	10.8
1951	72.0	51.1	23.8	27.3	20.9	10.9	10.0	57.4	40.4	11.5	28.9	17.1	3.1	14.0
1952	70.1	49.0	25.3	23.7	21.2	11.3	9.9	63.3	41.9	13.0	28.9	21.4	2.9	18.4
1953	66.9	46.4	25.8	20.6	20.5	11.0	9.5	69.7	44.6	13.7	30.9	25.1	3.1	21.9
1954	70.0	48.8	26.9	21.9	21.2	11.6	9.6	67.5	42.1	11.9	30.3	25.4	3.3	22.1
1955	76.9	53.2	30.3	22.9	23.7	13.0	10.7	76.9	48.3	14.7	33.5	28.6	3.6	25.0
1956	87.9	61.8	34.4	27.4	26.1	14.1	12.0	83.6	53.6	16.8	36.8	30.0	3.4	26.6
1957	94.9	66.6	37.2	29.4	28.3	14.8	13.5	87.9	56.1	17.1	39.0	31.8	3.4	28.4
1958	82.4	56.6	31.0	25.6	25.8	13.2	12.6	92.8	58.1	16.9	41.3	34.6	3.7	30.9
1959	83.7	56.1	30.5	25.6	27.6	14.0	13.5	101.9	68.0	22.8	45.3	33.8	4.0	29.8
1960	98.4	68.8	37.9	30.9	29.6	15.7	13.9	102.4	67.5	21.7	45.8	34.9	4.6	30.3
1961	100.7	69.1	38.0	31.1	31.6	16.9	14.7	103.3	69.0	21.1	47.9	34.3	4.8	29.6
1962	106.9	72.2	39.8	32.4	34.7	18.5	16.2	114.4	78.9	24.8	54.0	35.5	4.6	30.9
1963	114.7	77.6	42.1	35.5	37.1	20.0	17.2	116.6	81.2	26.2	55.0	35.4	5.1	30.3
1964	128.8	87.7	48.2	39.5	41.1	21.8	19.3	122.8	86.3	29.0	57.4	36.5	5.6	30.9
1965	132.0	88.2	50.0	38.2	43.8	23.2	20.6	134.7	97.0	35.6	61.4	37.7	6.2	31.6
1966	138.4	94.0	53.6	40.4	44.4	22.8	21.6	152.1	109.1	44.0	65.2	43.0	7.0	36.0
1967	143.6	96.5	58.8	37.7	47.1	23.8	23.3	160.5	113.0	48.0	65.0	47.5	7.5	40.0
1968	155.7	104.9	64.8	40.1	50.8	26.3	24.5	185.3	135.7	61.7	74.0	49.6	8.6	41.0
1969	165.0	110.0	69.5	40.5	55.0	29.0	26.0	199.9	144.6	65.6	79.0	55.2	12.0	43.2
1970	178.3	120.6	74.3	46.3	57.6	29.6	28.0	208.3	150.9	66.8	84.1	57.4	12.5	45.0
1971	179.2	119.3	72.9	46.4	59.9	30.5	29.4	218.9	166.2	74.4	91.8	52.7	9.8	42.9
1972	195.2	131.3	80.0	51.3	64.0	33.9	30.1	244.6	190.7	84.4	106.4	53.9	10.2	43.7
1973	242.3	160.6	99.3	61.3	81.7	46.2	35.4	273.8	218.2	88.9	129.4	55.6	13.9	41.7
1974	269.1	175.8	113.9	62.0	93.3	53.5	39.8	268.4	211.8	89.2	122.5	56.6	17.7	38.9
1975	259.7	171.5	112.1	59.5	88.2	45.6	42.6	240.8	187.9	72.4	115.5	52.9	16.3	36.6
1976	274.4	177.5	112.9	64.7	96.8	49.7	47.1	285.4	229.3	88.5	140.8	56.1	16.7	39.3
1977	281.6	178.1	111.2	66.9	103.6	53.5	50.1	317.1	259.4	99.3	160.1	57.7	16.1	41.6
1978	312.6	196.2	121.9	74.3	116.4	63.2	53.2	339.4	274.1	113.7	160.4	65.3	21.1	44.2
1979	356.8	218.2	136.6	81.6	138.6	86.6	52.0	353.2	277.9	115.7	162.2	75.3	30.8	44.5
1980	388.9	241.8	150.0	91.9	147.1	91.4	55.7	332.0	253.6	116.1	137.5	78.4	35.9	42.4
1981	392.7	238.5	143.8	94.6	154.3	96.3	57.9	343.4	258.7	126.1	132.6	84.7	41.1	43.6
1982	361.9	214.0	121.9	92.1	148.0	91.6	56.3	335.6	249.5	125.3	124.2	86.1	40.5	45.7
1983	348.1	207.6	119.6	88.0	140.5	85.0	55.5	368.1	282.2	150.4	131.9	85.8	37.1	48.7
1984	371.8	223.8	132.3	91.5	148.0	92.6	55.4	455.8	351.1	201.6	149.5	104.7	48.7	56.0
1985	367.2	231.6	143.7	87.9	135.6	80.0	55.6	471.4	367.9	218.7	149.3	103.5	43.1	60.4
1986	397.1	245.9	157.6	88.3	151.2	75.6	75.6	526.9	413.7	242.6	171.1	113.2	45.1	68.1
1987	451.8	286.5	186.2	100.3	165.2	81.1	84.2	570.3	440.9	262.1	178.8	129.4	55.8	73.6
1988	534.7	347.3	236.1	111.2	187.4	96.3	91.1	610.6	469.4	282.3	187.2	141.2	68.0	73.2
1989	593.3	390.8	268.9	121.9	202.6	105.1	97.5	647.4	499.3	302.9	196.4	148.2	74.9	73.2
1990 [p]	630.3	424.4	296.3	128.1	205.9	100.9	105.0	667.8	518.5	313.8	204.7	149.3	71.3	77.9
1982: IV	336.0	199.1	110.8	88.3	136.9	83.0	53.8	324.3	242.7	117.1	125.6	81.6	35.1	46.5
1983: IV	355.5	214.4	126.3	88.1	141.1	88.2	52.9	401.6	311.6	172.5	139.1	90.1	39.7	50.3
1984: IV	376.6	231.9	138.2	93.7	144.7	89.5	55.2	471.4	364.2	211.4	152.8	107.2	47.4	59.8
1985: IV	367.4	231.9	143.8	88.2	135.4	79.5	55.9	492.6	387.8	226.8	161.0	104.8	41.9	62.9
1986: IV	406.5	257.2	163.8	93.3	149.3	71.6	77.7	541.9	428.7	250.0	178.8	113.2	45.7	67.4
1987: IV	487.0	314.0	208.7	105.3	173.0	87.7	85.3	598.3	461.2	277.5	183.7	137.1	61.5	75.6
1988: I	521.7	338.1	227.1	111.0	183.6	94.1	89.6	599.0	460.6	276.2	184.4	138.4	62.5	75.9
II	527.3	344.4	232.9	111.4	183.0	92.5	90.5	599.5	459.8	276.9	182.9	139.7	66.8	72.9
III	534.3	345.6	234.6	110.9	188.8	96.2	92.6	612.8	471.3	283.7	187.6	141.5	69.8	71.8
IV	555.3	361.2	249.7	111.5	194.1	102.4	91.7	631.0	486.0	292.2	193.8	145.0	72.9	72.1
1989: I	576.1	376.9	257.9	119.0	199.2	104.3	94.9	627.3	480.6	292.7	187.9	146.7	73.4	73.3
II	593.2	390.7	267.6	123.1	202.5	107.1	95.4	646.5	492.4	299.0	193.4	154.1	80.7	73.3
III	592.5	390.3	271.0	119.3	202.2	103.6	98.5	656.6	509.8	307.7	202.2	146.7	74.0	72.8
IV	611.6	405.2	279.0	126.2	206.4	105.4	101.0	659.4	514.3	312.4	201.9	145.1	71.6	73.5
1990: I	628.1	422.4	292.8	129.6	205.7	101.9	103.9	663.5	517.8	308.5	209.3	145.6	69.5	76.1
II	620.1	418.4	293.4	125.0	201.7	97.4	104.3	664.7	515.2	310.2	205.0	149.4	72.9	76.5
III	630.5	421.0	296.3	124.6	209.5	103.2	106.4	677.0	526.5	317.5	209.0	150.5	70.6	79.9
IV [p]	642.4	435.8	302.7	133.1	206.6	101.3	105.3	666.0	514.5	318.9	195.6	151.5	72.4	79.1

[1] Factor income exports less factor income imports equals rest-of-the-world product.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–22.—*Relation of gross national product, net national product, and national income, 1929–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product	Less: Capital consumption allowances with capital consumption adjustment	Equals: Net national product	Less:			Plus: Subsidies less current surplus of government enterprises	Equals: National income
				Indirect business tax and nontax liability	Business transfer payments	Statistical discrepancy		
1929	103.9	9.9	94.0	7.1	0.6	1.5	−0.2	84.7
1933	56.0	7.6	48.4	7.1	.7	1.2	.0	39.4
1939	91.3	9.0	82.3	9.4	.5	1.7	.4	71.2
1940	100.4	9.4	91.1	10.1	.4	1.4	.4	79.6
1941	125.5	10.3	115.3	11.3	.5	.7	.1	102.8
1942	159.0	11.3	147.7	11.8	.5	−.7	.1	136.2
1943	192.7	11.6	181.1	12.8	.5	−1.7	.1	169.7
1944	211.4	12.0	199.4	14.2	.5	2.7	.6	182.6
1945	213.4	12.4	201.0	15.5	.5	4.0	.7	181.6
1946	212.4	14.2	198.2	17.1	.5	.7	.9	180.7
1947	235.2	17.6	217.6	18.4	.6	1.8	−.2	196.6
1948	261.6	20.4	241.2	20.1	.7	−1.3	−.1	221.5
1949	260.4	22.0	238.4	21.3	.8	.8	−.3	215.2
1950	288.3	23.6	264.6	23.4	.8	.8	.1	239.8
1951	333.4	27.2	306.2	25.3	.9	2.7	−.1	277.3
1952	351.6	29.2	322.5	27.7	1.0	1.8	−.3	291.6
1953	371.6	30.9	340.7	29.7	1.2	2.6	−.5	306.6
1954	372.5	32.5	340.0	29.6	1.1	2.7	−.3	306.3
1955	405.9	34.4	371.5	32.2	1.2	1.8	.0	336.3
1956	428.2	38.1	390.1	35.0	1.4	−1.9	.7	356.3
1957	451.0	41.1	409.9	37.4	1.5	−1.2	.7	372.8
1958	456.8	42.8	414.0	38.6	1.6	−.1	1.1	375.0
1959	495.8	44.6	451.2	41.7	1.8	−1.5	.1	409.2
1960	515.3	46.4	468.9	45.3	2.0	−2.8	.4	424.9
1961	533.8	47.8	486.1	48.0	2.0	−1.2	1.7	439.0
1962	574.6	49.4	525.2	51.5	2.1	.0	1.8	473.3
1963	606.9	51.4	555.5	54.6	2.4	−.6	1.1	500.3
1964	649.8	53.9	595.9	58.7	2.7	−1.4	1.7	537.6
1965	705.1	57.4	647.7	62.5	2.8	−1.2	1.6	585.2
1966	772.0	62.1	709.9	65.2	3.0	2.1	2.5	642.0
1967	816.4	67.4	749.0	70.1	3.1	−.4	1.6	677.7
1968	892.7	73.9	818.7	78.7	3.4	−1.1	1.4	739.1
1969	963.9	81.4	882.5	86.3	3.9	−3.9	1.9	798.1
1970	1,015.5	88.8	926.6	94.0	4.1	−1.1	2.9	832.6
1971	1,102.7	97.5	1,005.1	103.4	4.4	1.8	2.6	898.1
1972	1,212.8	107.9	1,104.8	111.1	4.9	−1.6	3.7	994.1
1973	1,359.3	118.1	1,241.2	120.8	5.5	−4.3	3.5	1,122.7
1974	1,472.8	137.5	1,335.4	129.0	5.8	−1.7	1.2	1,203.5
1975	1,598.4	161.8	1,436.6	140.0	7.4	2.5	2.4	1,289.1
1976	1,782.8	179.2	1,603.6	151.7	7.9	3.6	1.0	1,441.4
1977	1,990.5	201.5	1,789.0	165.7	8.6	.0	3.0	1,617.8
1978	2,249.7	229.9	2,019.8	178.1	9.3	−1.9	3.9	1,838.2
1979	2,508.2	265.8	2,242.4	189.4	10.3	−1.0	3.5	2,047.3
1980	2,732.0	303.8	2,428.1	213.3	12.1	4.9	5.7	2,203.5
1981	3,052.6	347.8	2,704.8	251.5	12.4	4.1	6.7	2,443.5
1982	3,166.0	383.2	2,782.8	258.8	14.3	−.1	8.7	2,518.4
1983	3,405.7	396.6	3,009.1	282.6	16.0	5.2	14.1	2,719.5
1984	3,772.2	415.5	3,356.8	313.9	18.7	5.4	9.9	3,028.6
1985	4,014.9	437.2	3,577.6	333.6	22.0	−4.8	7.2	3,234.0
1986	4,231.6	460.1	3,771.5	348.9	24.6	−1.8	12.8	3,412.6
1987	4,515.6	487.0	4,028.6	367.8	28.5	−10.6	17.4	3,660.3
1988	4,873.7	514.3	4,359.4	388.7	30.3	−28.2	16.2	3,984.9
1989	5,200.8	554.4	4,646.4	414.0	32.4	−17.0	6.3	4,223.3
1990 p	5,463.0	575.7	4,887.4	440.4	35.0	−3.1	2.5	4,417.5
1982: IV	3,212.5	393.2	2,819.3	264.5	15.2	6.8	15.4	2,548.2
1983: IV	3,545.8	400.8	3,145.0	294.1	16.5	2.5	19.6	2,851.5
1984: IV	3,851.8	423.5	3,428.3	322.7	20.0	−2.1	8.4	3,096.1
1985: IV	4,107.9	446.9	3,661.0	338.3	23.0	−7.9	5.3	3,312.8
1986: IV	4,297.3	470.8	3,826.5	353.1	25.5	−9.6	15.6	3,473.1
1987: IV	4,647.6	496.7	4,150.9	375.3	29.6	−18.8	26.7	3,791.5
1988: I	4,735.8	504.8	4,231.0	380.2	29.8	−24.7	18.7	3,864.3
II	4,831.4	510.5	4,320.9	385.3	30.1	−23.9	19.5	3,948.9
III	4,917.9	516.3	4,401.6	391.6	30.4	−33.9	8.8	4,022.3
IV	5,009.8	525.7	4,484.0	397.6	30.8	−30.5	17.9	4,104.1
1989: I	5,101.3	534.7	4,566.6	403.5	31.4	−28.6	17.0	4,177.3
II	5,174.0	543.0	4,631.1	411.1	32.1	−20.3	8.5	4,216.8
III	5,238.6	567.5	4,671.1	419.9	32.7	−16.2	−2.6	4,232.1
IV	5,289.3	572.5	4,716.8	421.5	33.4	−3.0	2.2	4,267.1
1990: I	5,375.4	567.0	4,808.4	431.7	34.1	.7	8.4	4,350.3
II	5,443.3	571.1	4,872.2	433.0	34.7	−3.2	3.6	4,411.3
III	5,514.6	579.3	4,935.3	444.9	35.4	−4.9	−7.5	4,452.4
IV p	5,518.9	585.2	4,933.7	451.9	36.0	....	5.3	....

Source: Department of Commerce, Bureau of Economic Analysis.

Table B–23.—*Relation of national income and personal income, 1929–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	National income	Less:				Plus:				Equals:
		Corporate profits with inventory valuation and capital consumption adjustments	Net interest	Contributions for social insurance	Wage accruals less disbursements	Government transfer payments to persons	Personal interest income	Personal dividend income	Business transfer payments	Personal income
1929	84.7	9.6	4.7	0.3	0.0	0.9	6.9	5.8	0.6	84.3
1933	39.4	−1.5	4.1	.3	.0	1.5	5.5	2.0	.7	46.3
1939	71.2	5.5	3.6	2.2	.0	2.5	5.3	3.8	.5	72.1
1940	79.6	8.8	3.3	2.4	.0	2.7	5.3	4.0	.4	77.6
1941	102.8	14.3	3.3	2.8	.0	2.6	5.3	4.4	.5	95.2
1942	136.2	19.7	3.1	3.5	.0	2.7	5.2	4.3	.5	122.4
1943	169.7	24.0	2.7	4.6	.2	2.5	5.1	4.4	.5	150.7
1944	182.6	24.2	2.3	5.2	−.2	3.1	5.2	4.6	.5	164.5
1945	181.6	19.7	2.2	6.3	.0	5.6	5.8	4.6	.5	170.0
1946	180.7	17.2	1.8	7.7	.0	10.8	6.6	5.6	.5	177.6
1947	196.6	22.9	2.3	6.7	.0	11.2	7.5	6.3	.6	190.2
1948	221.5	30.3	2.4	6.0	.0	10.6	8.0	7.0	.7	209.2
1949	215.2	28.0	2.6	6.6	.0	11.7	8.7	7.2	.8	206.4
1950	239.8	34.9	3.0	7.4	.0	14.4	9.6	8.8	.8	228.1
1951	277.3	39.9	3.5	8.8	.1	11.6	10.4	8.5	.9	256.5
1952	291.6	37.5	3.9	9.3	.0	12.2	11.2	8.5	1.0	273.8
1953	306.6	37.7	4.4	9.6	−.1	13.1	12.4	8.8	1.2	290.5
1954	306.3	36.6	5.2	10.6	.0	15.3	13.7	9.1	1.1	293.0
1955	336.3	47.1	5.8	12.0	.0	16.4	14.9	10.3	1.2	314.2
1956	356.3	45.7	6.5	13.5	.0	17.5	16.6	11.1	1.4	337.2
1957	372.8	45.3	7.8	15.5	.0	20.3	18.7	11.5	1.5	356.3
1958	375.0	40.3	9.5	15.9	.0	24.7	20.3	11.3	1.6	367.1
1959	409.2	51.4	10.2	18.8	.0	25.7	22.3	12.2	1.8	390.7
1960	424.9	49.5	11.3	21.9	.0	27.5	24.9	12.9	2.0	409.4
1961	439.0	50.3	12.9	22.9	.0	31.5	26.3	13.3	2.0	426.0
1962	473.3	58.3	14.6	25.4	.0	32.6	28.9	14.4	2.1	453.2
1963	500.3	63.6	16.3	28.5	.0	34.5	32.2	15.5	2.4	476.3
1964	537.6	70.7	18.2	30.1	.0	36.0	35.5	17.3	2.7	510.2
1965	585.2	81.3	20.9	31.6	.0	39.1	39.6	19.1	2.8	552.0
1966	642.0	86.6	24.3	40.6	.0	43.6	44.2	19.4	3.0	600.8
1967	677.7	84.1	27.4	45.5	.0	52.3	48.2	20.2	3.1	644.5
1968	739.1	90.7	29.8	50.4	.0	60.6	53.2	21.9	3.4	707.2
1969	798.1	87.4	34.6	57.9	.0	67.5	60.9	22.4	3.9	772.9
1970	832.6	74.7	41.2	62.2	.0	81.8	69.3	22.2	4.1	831.8
1971	898.1	87.1	46.3	68.9	.6	97.0	74.7	22.6	4.4	894.0
1972	994.1	100.7	51.0	79.0	.0	108.4	80.8	24.1	4.9	981.6
1973	1,122.7	113.3	59.6	97.6	−.1	124.1	93.3	26.6	5.5	1,101.7
1974	1,203.5	101.7	75.5	110.5	−.5	147.4	111.9	28.9	5.8	1,210.1
1975	1,289.1	117.6	83.8	118.5	.1	185.7	122.5	28.7	7.4	1,313.4
1976	1,441.4	145.2	88.8	134.5	.1	202.8	134.1	33.8	7.9	1,451.4
1977	1,617.8	174.8	105.3	149.8	.1	217.5	155.4	38.2	8.6	1,607.5
1978	1,838.2	197.2	126.3	171.7	.3	234.8	182.5	43.0	9.3	1,812.4
1979	2,047.3	200.1	158.3	197.8	−.2	262.8	221.5	48.1	10.3	2,034.0
1980	2,203.5	177.2	200.9	216.5	.0	312.6	271.9	52.9	12.1	2,258.5
1981	2,443.5	188.0	248.1	251.2	.1	355.7	335.4	61.3	12.4	2,520.9
1982	2,518.4	150.0	272.3	269.6	.0	396.2	369.7	63.9	14.3	2,670.8
1983	2,719.5	213.7	281.0	291.0	−.4	426.6	393.1	68.7	16.0	2,838.6
1984	3,028.6	266.9	304.8	324.9	.2	437.9	444.7	75.5	18.7	3,108.7
1985	3,234.0	282.3	319.0	354.1	−.2	467.8	478.0	78.7	22.0	3,325.3
1986	3,412.6	282.1	325.5	379.2	.0	496.8	493.2	85.8	24.6	3,526.2
1987	3,660.3	308.3	328.6	400.1	.0	521.3	501.3	91.8	28.5	3,766.4
1988	3,984.9	337.6	371.8	442.6	.0	557.4	547.9	102.2	30.3	4,070.8
1989	4,223.3	311.6	445.1	476.8	.0	604.5	643.2	114.4	32.4	4,384.3
1990 p	4,417.5	297.1	467.1	506.9	.0	659.5	680.9	123.8	35.0	4,645.6
1982: IV	2,548.2	146.1	266.9	273.0	.0	420.2	366.2	65.4	15.2	2,729.2
1983: IV	2,851.5	248.5	290.2	299.2	.0	429.0	411.6	71.0	16.5	2,941.8
1984: IV	3,096.1	266.9	313.1	331.5	.6	443.0	464.4	76.8	20.0	3,188.3
1985: IV	3,312.8	291.4	322.7	362.1	.0	474.5	485.9	79.0	23.0	3,399.1
1986: IV	3,473.1	275.2	324.0	387.7	.0	505.7	492.7	87.7	25.5	3,597.8
1987: IV	3,791.5	323.1	338.2	408.7	−.2	527.7	516.3	95.5	29.6	3,890.9
1988: I	3,864.3	330.5	351.4	431.6	.0	549.2	523.5	97.9	29.8	3,951.3
II	3,948.9	335.8	361.9	438.8	.0	554.4	536.3	100.2	30.1	4,033.4
III	4,022.3	334.4	379.8	446.0	.0	559.9	556.2	103.8	30.4	4,112.3
IV	4,104.1	349.6	394.1	453.8	.0	566.1	575.6	107.1	30.8	4,186.2
1989: I	4,177.3	327.3	419.2	469.1	.0	588.1	610.4	110.6	31.4	4,302.2
II	4,216.8	321.4	443.4	474.6	.0	598.1	642.1	113.2	32.1	4,362.9
III	4,232.1	306.7	456.2	479.1	.0	609.1	655.2	115.7	32.7	4,402.8
IV	4,267.1	290.9	461.7	484.2	.0	622.5	664.9	118.2	33.4	4,469.2
1990: I	4,350.3	296.8	463.6	498.9	.0	646.8	670.5	120.5	34.1	4,562.8
II	4,411.3	306.6	466.2	503.9	.0	652.0	678.0	122.9	34.7	4,622.2
III	4,452.4	300.7	468.3	511.3	.0	661.0	685.3	124.9	35.4	4,678.5
IV p	....	....	470.2	513.6	.0	678.3	690.1	126.7	36.0	4,719.0

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–24.—*National income by type of income, 1929–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	National income [1]	Compensation of employees			Proprietors' income with inventory valuation and capital consumption adjustments							
		Total	Wages and salaries	Supplements to wages and salaries [2]	Total	Farm			Nonfarm			
						Total	Proprietors' income [3]	Capital consumption adjustment	Total	Proprietors' income	Inventory valuation adjustment	Capital consumption adjustment
1929	84.7	51.1	50.5	0.7	14.4	6.1	6.3	−0.2	8.3	8.8	0.1	−0.6
1933	39.4	29.6	29.0	.6	5.4	2.5	2.5	.0	2.9	3.9	−.5	−.5
1939	71.2	48.2	46.0	2.2	11.4	4.4	4.5	−.1	7.1	7.6	−.2	−.4
1940	79.6	52.2	49.9	2.3	12.6	4.4	4.5	−.1	8.2	8.6	.0	−.3
1941	102.8	64.8	62.1	2.8	17.1	6.4	6.5	−.2	10.8	11.7	−.6	−.3
1942	136.2	85.3	82.1	3.2	23.9	10.1	10.3	−.2	13.8	14.4	−.4	−.3
1943	169.7	109.6	105.8	3.8	28.8	12.0	12.2	−.2	16.8	17.1	−.2	−.2
1944	182.6	121.3	116.7	4.5	30.0	11.9	12.2	−.3	18.1	18.3	−.1	−.1
1945	181.6	123.3	117.5	5.8	31.5	12.4	12.6	−.3	19.1	19.3	−.1	−.1
1946	180.7	119.6	112.0	7.6	36.3	14.8	15.2	−.4	21.5	23.3	−1.7	−.1
1947	196.6	130.1	123.1	7.0	35.5	15.1	15.6	−.5	20.4	21.8	−1.5	.1
1948	221.5	142.1	135.5	6.5	40.4	17.5	18.2	−.7	22.9	23.1	−.4	.2
1949	215.2	142.0	134.7	7.3	35.9	12.8	13.5	−.7	23.1	22.2	.5	.5
1950	239.8	155.4	147.2	8.2	38.8	13.6	14.3	−.7	25.2	25.7	−1.1	.6
1951	277.3	181.6	171.6	10.0	44.0	16.0	16.8	−.8	28.0	27.7	−.3	.6
1952	291.6	196.3	185.6	10.7	44.4	15.0	15.9	−.9	29.4	28.5	.2	.7
1953	306.6	210.4	199.0	11.5	43.4	13.0	13.9	−.9	30.4	29.8	−.2	.7
1954	306.3	209.4	197.2	12.1	43.5	12.4	13.2	−.8	31.1	30.4	.0	.8
1955	336.3	225.9	212.1	13.8	45.4	11.3	12.1	−.8	34.0	33.5	−.2	.7
1956	356.3	244.7	229.0	15.7	46.9	11.1	12.0	−.9	35.8	35.4	−.5	.9
1957	372.8	257.8	239.9	17.8	48.8	11.0	11.9	−.9	37.8	37.2	−.3	.9
1958	375.0	259.8	241.3	18.5	51.5	13.1	14.0	−.9	38.5	37.7	−.1	.9
1959	409.2	281.2	259.8	21.4	51.7	10.8	11.7	−.9	40.9	40.1	.0	.9
1960	424.9	296.7	272.8	23.8	52.1	11.6	12.4	−.8	40.5	39.7	.0	.8
1961	439.0	305.6	280.5	25.1	54.3	12.0	12.8	−.8	42.3	41.7	.0	.6
1962	473.3	327.4	299.3	28.1	56.6	12.1	12.9	−.8	44.4	43.8	.0	.6
1963	500.3	345.5	314.8	30.7	57.7	11.9	12.6	−.7	45.7	45.1	.0	.7
1964	537.6	371.0	337.7	33.2	60.5	10.7	11.4	−.7	49.8	49.1	−.1	.7
1965	585.2	399.8	363.7	36.1	65.1	13.0	13.7	−.7	52.1	51.8	−.2	.4
1966	642.0	443.0	400.3	42.7	69.6	14.0	14.8	−.8	55.5	55.5	−.2	.3
1967	677.7	475.5	428.9	46.6	71.1	12.7	13.6	−.8	58.4	58.4	−.2	.2
1968	739.1	524.7	471.9	52.8	75.4	12.8	13.7	−.9	62.6	63.1	−.4	−.1
1969	798.1	578.4	518.3	60.1	79.3	14.6	15.8	−1.1	64.7	65.1	−.5	.1
1970	832.6	618.3	551.5	66.8	80.2	14.7	16.0	−1.3	65.4	66.0	−.5	.0
1971	898.1	659.4	584.5	74.9	86.8	15.5	16.8	−1.3	71.4	72.3	−.6	−.3
1972	994.1	726.2	638.7	87.6	98.3	19.4	21.1	−1.7	79.0	79.6	−.7	.1
1973	1,122.7	812.8	708.6	104.2	119.0	33.7	35.6	−1.9	85.3	87.2	−2.0	.1
1974	1,203.5	891.3	772.2	119.1	118.8	27.5	30.1	−2.6	91.3	95.3	−3.8	−.3
1975	1,289.1	948.7	814.7	134.0	125.4	25.4	29.0	−3.6	100.0	102.2	−1.2	−1.0
1976	1,441.4	1,057.9	899.6	158.3	137.7	20.6	24.6	−4.0	117.1	119.6	−1.3	−1.3
1977	1,617.8	1,176.6	994.0	182.6	152.9	20.5	25.1	−4.6	132.4	135.1	−1.3	−1.4
1978	1,838.2	1,329.2	1,119.6	209.7	176.2	27.0	32.4	−5.3	149.2	152.8	−2.3	−1.4
1979	2,047.3	1,491.4	1,251.9	239.5	191.9	31.7	38.0	−6.3	160.1	164.0	−2.9	−1.0
1980	2,203.5	1,638.2	1,372.0	266.3	180.7	20.5	28.1	−7.6	160.1	164.3	−2.9	−1.2
1981	2,443.5	1,807.4	1,510.4	297.1	186.8	30.7	39.4	−8.7	156.1	155.2	−1.4	2.3
1982	2,518.4	1,907.0	1,586.1	320.9	175.5	24.6	33.9	−9.3	150.9	148.5	−.5	2.9
1983	2,719.5	2,020.7	1,676.2	344.5	190.9	12.4	21.8	−9.4	178.4	167.3	−.8	12.0
1984	3,028.6	2,213.9	1,838.8	375.1	234.5	30.5	39.6	−9.2	204.0	182.4	−.4	22.0
1985	3,234.0	2,367.5	1,975.2	392.4	255.9	30.2	38.9	−8.7	225.6	194.6	−.2	31.2
1986	3,412.6	2,511.4	2,094.8	416.6	282.0	34.7	43.1	−8.4	247.2	210.0	−.2	37.4
1987	3,660.3	2,686.4	2,249.7	436.6	323.4	42.8	50.8	−8.0	280.6	247.1	−1.0	34.5
1988	3,984.9	2,905.1	2,431.1	474.0	354.2	43.7	51.2	−7.5	310.5	274.7	−1.4	37.2
1989	4,223.3	3,079.0	2,573.2	505.8	379.3	48.6	56.3	−7.7	330.7	298.9	−1.0	32.8
1990 *p*	4,417.5	3,244.2	2,705.3	538.9	402.4	49.9	57.5	−7.6	352.5	323.9	−1.3	30.0
1982: IV	2,548.2	1,931.1	1,603.7	327.4	188.3	28.5	38.0	−9.4	159.8	156.9	−.6	3.5
1983: IV	2,851.5	2,092.7	1,739.4	353.4	207.8	19.3	28.5	−9.3	188.6	172.7	−.7	16.5
1984: IV	3,096.1	2,272.7	1,891.1	381.7	237.8	28.1	37.5	−9.3	209.7	182.5	.3	26.9
1985: IV	3,312.8	2,426.7	2,027.4	399.3	264.2	29.2	37.8	−8.6	235.0	201.1	−.3	34.2
1986: IV	3,473.1	2,571.2	2,143.1	428.1	289.2	37.2	45.3	−8.1	252.0	215.5	−.3	36.8
1987: IV	3,791.5	2,770.3	2,323.6	446.7	345.2	52.3	60.2	−7.9	293.0	260.4	−2.4	35.0
1988: I	3,864.3	2,820.0	2,359.3	460.7	346.3	47.1	54.9	−7.8	299.2	264.5	−1.5	36.3
II	3,948.9	2,879.0	2,409.9	469.1	356.8	48.8	56.4	−7.6	308.1	271.8	−1.3	37.6
III	4,022.3	2,934.6	2,456.1	478.5	356.5	43.4	50.7	−7.4	313.2	276.5	−1.3	38.0
IV	4,104.1	2,986.7	2,499.0	487.7	357.0	35.5	42.9	−7.4	321.5	286.0	−1.5	37.1
1989: I	4,177.3	3,029.7	2,533.7	496.0	387.8	59.6	67.1	−7.5	328.2	293.8	−.9	35.3
II	4,216.8	3,062.6	2,560.0	502.6	379.6	50.5	58.1	−7.6	329.1	296.1	−.5	33.6
III	4,232.1	3,095.2	2,586.6	508.6	368.1	38.7	46.7	−8.0	329.5	298.9	−1.3	31.9
IV	4,267.1	3,128.6	2,612.7	515.9	381.7	45.7	53.4	−7.7	336.0	306.7	−1.1	30.4
1990: I	4,350.3	3,180.4	2,651.6	528.8	404.0	57.4	65.1	−7.7	346.6	317.1	−.9	30.3
II	4,411.3	3,232.5	2,696.3	536.1	401.7	51.0	58.5	−7.6	350.8	320.7	−.2	30.2
III	4,452.4	3,276.9	2,734.2	542.7	397.9	42.4	49.9	−7.6	355.6	329.3	−3.5	29.8
IV *p*	....	3,286.9	2,739.1	547.8	406.1	48.9	56.4	−7.5	357.2	328.4	−.7	29.5

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[1] National income is the total net income earned in production. It differs from gross national product mainly in that it excludes depreciation charges and other allowances for business and institutional consumption of durable capital goods and indirect business taxes. See Table B–22.

See next page for continuation of table.

TABLE B–24.—*National income by type of income, 1929–90*—Continued

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Rental income of persons with capital consumption adjustment			Corporate profits with inventory valuation and capital consumption adjustments									Net interest
	Total	Rental income of persons	Capital consumption adjustment	Total	Profits with inventory valuation adjustment and without capital consumption adjustment							Capital consumption adjustment	
					Total	Profits					Inventory valuation adjustment		
						Profits before tax	Profits tax liability	Profits after tax					
								Total	Dividends	Undistributed profits			
1929	4.9	5.6	−0.7	9.6	10.5	10.0	1.4	8.6	5.8	2.8	0.5	−0.9	4.7
1933	2.0	2.1	−.1	−1.5	−1.2	1.0	.5	.4	2.0	−1.6	−2.1	−.3	4.1
1939	2.6	3.2	−.5	5.5	6.5	7.2	1.4	5.7	3.8	2.0	−.7	−1.0	3.6
1940	2.7	3.3	−.6	8.8	9.8	10.0	2.8	7.2	4.0	3.2	−.2	−1.1	3.3
1941	3.2	4.0	−.8	14.3	15.4	17.9	7.6	10.3	4.4	5.8	−2.5	−1.1	3.3
1942	4.1	5.1	−.9	19.7	20.5	21.7	11.4	10.3	4.3	6.0	−1.2	−.8	3.1
1943	4.6	5.7	−1.1	24.0	24.5	25.3	14.1	11.2	4.4	6.7	−.8	−.5	2.7
1944	4.8	6.1	−1.3	24.2	24.0	24.2	12.9	11.3	4.6	6.7	−.3	.2	2.3
1945	5.0	6.5	−1.5	19.7	19.3	19.8	10.7	9.1	4.6	4.5	−.6	.4	2.2
1946	5.8	7.5	−1.7	17.2	19.6	24.8	9.1	15.7	5.6	10.2	−5.3	−2.4	1.8
1947	5.8	8.2	−2.4	22.9	25.9	31.8	11.3	20.5	6.3	14.2	−5.9	−2.9	2.3
1948	6.4	9.1	−2.7	30.3	33.4	35.6	12.4	23.2	7.0	16.2	−2.2	−3.2	2.4
1949	6.7	9.4	−2.7	28.0	31.1	29.2	10.2	19.0	7.2	11.8	1.9	−3.0	2.6
1950	7.7	10.5	−2.8	34.9	37.9	42.9	17.9	25.0	8.8	16.2	−5.0	−3.0	3.0
1951	8.3	11.5	−3.2	39.9	43.3	44.5	22.6	21.9	8.5	13.4	−1.2	−3.4	3.5
1952	9.4	12.7	−3.3	37.5	40.6	39.6	19.4	20.2	8.5	11.8	1.0	−3.2	3.9
1953	10.7	13.9	−3.3	37.7	40.2	41.2	20.3	20.9	8.8	12.1	−1.0	−2.5	4.4
1954	11.6	14.9	−3.2	36.6	38.4	38.7	17.6	21.1	9.1	11.9	−.3	−1.8	5.2
1955	12.0	15.3	−3.3	47.1	47.5	49.2	22.0	27.2	10.3	16.9	−1.7	−.4	5.8
1956	12.4	15.9	−3.5	45.7	46.9	49.6	22.0	27.6	11.1	16.6	−2.7	−1.2	6.5
1957	13.1	16.5	−3.5	45.3	46.6	48.1	21.4	26.7	11.5	15.2	−1.5	−1.3	7.8
1958	13.9	17.3	−3.4	40.3	41.6	41.9	19.0	22.9	11.3	11.6	−.3	−1.3	9.5
1959	14.6	18.0	−3.4	51.4	52.3	52.6	23.6	28.9	12.2	16.7	−.3	−.8	10.2
1960	15.3	18.7	−3.4	49.5	49.8	49.9	22.7	27.2	12.9	14.3	−.2	−.3	11.3
1961	15.8	19.1	−3.3	50.3	50.1	49.8	22.8	27.1	13.3	13.7	.3	.2	12.9
1962	16.5	19.8	−3.3	58.3	55.2	55.1	24.0	31.2	14.4	16.8	.0	3.1	14.6
1963	17.1	20.3	−3.2	63.6	59.8	59.8	26.2	33.5	15.5	18.0	.1	3.8	16.3
1964	17.3	20.5	−3.2	70.7	66.2	66.7	28.0	38.7	17.3	21.4	−.5	4.5	18.2
1965	18.1	21.3	−3.3	81.3	76.2	77.4	30.9	46.5	19.1	27.4	−1.2	5.2	20.9
1966	18.6	22.2	−3.6	86.6	81.2	83.3	33.7	49.6	19.4	30.2	−2.1	5.4	24.3
1967	19.6	23.5	−3.9	84.1	78.6	80.1	32.7	47.5	20.2	27.3	−1.6	5.5	27.4
1968	18.4	22.9	−4.5	90.7	85.4	89.1	39.4	49.7	22.0	27.7	−3.7	5.3	29.8
1969	18.4	24.2	−5.8	87.4	81.4	87.2	39.7	47.5	22.5	25.0	−5.9	6.1	34.6
1970	18.2	24.6	−6.4	74.7	69.5	76.0	34.4	41.7	22.5	19.2	−6.6	5.2	41.2
1971	18.6	25.9	−7.4	87.1	82.7	87.3	37.7	49.6	22.9	26.6	−4.6	4.3	46.3
1972	17.9	26.5	−8.6	100.7	94.9	101.5	41.9	59.6	24.4	35.2	−6.6	5.8	51.0
1973	18.0	28.1	−10.1	113.3	107.1	127.2	49.3	77.9	27.0	50.8	−20.0	6.2	59.6
1974	16.1	28.9	−12.7	101.7	99.4	138.9	51.8	87.1	29.7	57.3	−39.5	2.3	75.5
1975	13.5	28.6	−15.0	117.6	123.9	134.8	50.9	83.9	29.6	54.3	−11.0	−6.2	83.8
1976	11.9	28.9	−17.0	145.2	155.3	170.3	64.2	106.0	34.6	71.4	−14.9	−10.1	88.8
1977	8.2	28.8	−20.6	174.8	183.8	200.4	73.0	127.4	39.5	87.9	−16.6	−9.0	105.3
1978	9.3	34.2	−24.9	197.2	208.2	233.5	83.5	150.0	44.7	105.2	−25.3	−10.9	126.3
1979	5.6	35.7	−30.1	200.1	214.1	257.2	88.0	169.2	50.1	119.1	−43.2	−14.0	158.3
1980	6.6	41.4	−34.8	177.2	194.0	237.1	84.8	152.3	54.7	97.6	−43.1	−16.8	200.9
1981	13.3	52.2	−38.9	188.0	202.3	226.5	81.1	145.4	63.6	81.8	−24.2	−14.4	248.1
1982	13.6	54.4	−40.8	150.0	159.2	169.6	63.1	106.5	66.9	39.6	−10.4	−9.2	272.3
1983	13.2	55.0	−41.8	213.7	196.7	207.6	77.2	130.4	71.5	58.9	−10.9	17.0	281.0
1984	8.5	51.9	−43.3	266.9	234.2	240.0	93.9	146.1	79.0	67.0	−5.8	32.7	304.8
1985	9.2	54.2	−45.0	282.3	222.6	224.3	96.4	127.8	83.3	44.6	−1.7	59.7	319.0
1986	11.6	56.5	−45.0	282.1	228.3	221.6	106.3	115.3	91.3	24.0	6.7	53.8	325.5
1987	13.7	61.6	−47.9	308.3	255.9	275.3	126.9	148.4	98.2	50.2	−19.4	52.4	328.6
1988	16.3	66.1	−49.8	337.6	289.8	316.7	136.2	180.5	110.0	70.5	−27.0	47.8	371.8
1989	8.2	64.1	−55.8	311.6	286.1	307.7	135.1	172.6	123.5	49.1	−21.7	25.5	445.1
1990 ᵖ	6.7	61.4	−54.8	297.1	292.1	305.4	134.1	171.3	133.9	37.4	−13.2	4.9	467.1
1982: IV	15.8	56.5	−40.7	146.1	150.7	164.1	59.8	104.3	68.5	35.8	−13.4	−4.5	266.9
1983: IV	12.4	54.3	−41.9	248.5	223.4	231.5	88.1	143.4	73.9	69.5	−8.1	25.1	290.2
1984: IV	5.6	49.6	−44.0	266.9	224.6	226.1	87.0	139.2	80.8	58.4	−1.6	42.3	313.1
1985: IV	7.8	54.5	−46.7	291.4	228.4	235.0	99.8	135.2	84.0	51.2	−6.6	63.0	322.7
1986: IV	13.5	59.1	−45.6	275.2	226.1	234.1	113.1	121.0	93.6	27.4	−8.0	49.1	324.0
1987: IV	14.6	64.3	−49.6	323.1	268.6	289.7	132.1	157.6	102.2	55.4	−21.1	54.5	338.2
1988: I	16.1	66.2	−50.0	330.5	278.0	299.8	128.2	171.6	105.0	66.6	−21.8	52.5	351.4
II	15.3	65.1	−49.7	335.8	285.3	315.6	136.7	178.9	107.9	71.0	−30.3	50.5	361.9
III	17.0	66.4	−49.5	334.4	287.1	320.4	137.9	182.5	111.8	70.8	−33.3	47.3	379.8
IV	16.8	66.6	−49.8	349.6	308.7	331.1	142.1	189.1	115.3	73.8	−22.5	40.9	394.1
1989: I	13.3	64.3	−51.0	327.3	292.1	335.1	148.3	186.7	119.1	67.6	−43.0	35.2	419.2
II	9.7	62.3	−52.6	321.4	291.5	314.6	140.8	173.8	122.1	51.7	−23.1	29.9	443.4
III	5.8	66.6	−60.8	306.7	285.3	291.4	127.8	163.6	125.0	38.6	−6.1	21.4	456.2
IV	4.1	63.0	−58.9	290.9	275.3	289.8	123.5	166.3	127.7	38.6	−14.5	15.6	461.7
1990: I	5.5	60.2	−54.6	296.8	285.5	296.9	129.9	167.1	130.3	36.8	−11.4	11.3	463.6
II	4.3	58.8	−54.5	306.6	298.8	299.3	133.1	166.1	133.0	33.2	−.5	7.7	466.2
III	8.4	63.5	−55.1	300.7	298.7	318.5	139.1	179.4	135.1	44.3	−19.8	2.0	468.3
IV ᵖ	8.5	63.2	−54.7	....	....	....	....	....	137.2	....	−21.2	−1.4	470.2

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[2] Consists mainly of employer contributions for social insurance and to private pension, health, and welfare funds.
[3] With inventory valuation adjustment.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–25.—*Sources of personal income, 1929–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Personal income	Wage and salary disbursements [1]						Other labor income [1]	Proprietors' income with inventory valuation and capital consumption adjustments	
		Total	Commodity-producing industries		Distributive industries	Service industries	Government and government enterprises		Farm	Nonfarm
			Total	Manufacturing						
1929	84.3	50.5	21.5	16.1	15.6	8.4	5.0	0.5	6.1	8.3
1933	46.3	29.0	9.8	7.8	8.8	5.2	5.2	.4	2.5	2.9
1939	72.1	46.0	17.4	13.6	13.3	7.1	8.2	.6	4.4	7.1
1940	77.6	49.9	19.7	15.6	14.2	7.5	8.5	.6	4.4	8.2
1941	95.2	62.1	27.5	21.7	16.3	8.1	10.2	.7	6.4	10.8
1942	122.4	82.1	39.1	30.9	18.0	9.0	16.0	.9	10.1	13.8
1943	150.7	105.6	49.0	40.9	20.1	9.9	26.6	1.1	12.0	16.8
1944	164.5	116.9	50.4	42.9	22.7	10.9	33.0	1.5	11.9	18.1
1945	170.0	117.5	45.9	38.2	24.8	11.9	34.9	1.8	12.4	19.1
1946	177.6	112.0	46.0	36.5	31.0	14.3	20.7	2.0	14.8	21.5
1947	190.2	123.1	54.2	42.5	35.2	16.1	17.5	2.4	15.1	20.4
1948	209.2	135.5	61.1	47.1	37.5	17.9	19.0	2.7	17.5	22.9
1949	206.4	134.8	57.8	44.6	37.7	18.5	20.8	2.9	12.8	23.1
1950	228.1	147.2	64.8	50.3	39.9	19.9	22.6	3.7	13.6	25.2
1951	256.5	171.5	76.4	59.4	44.4	21.6	29.2	4.6	16.0	28.0
1952	273.8	185.6	82.1	64.2	47.0	23.2	33.3	5.2	15.0	29.4
1953	290.5	199.0	89.8	71.3	49.9	25.0	34.4	5.9	13.0	30.4
1954	293.0	197.2	85.8	67.6	50.3	26.2	34.9	6.1	12.4	31.1
1955	314.2	212.1	93.3	73.9	53.6	28.7	36.6	7.0	11.3	34.0
1956	337.2	229.0	100.8	79.5	58.0	31.5	38.8	8.0	11.1	35.8
1957	356.3	239.9	104.4	82.5	60.7	33.8	41.0	9.0	11.0	37.8
1958	367.1	241.3	100.3	78.7	61.1	35.9	44.1	9.4	13.1	38.5
1959	390.7	259.8	109.9	86.9	65.1	38.8	46.0	10.6	10.8	40.9
1960	409.4	272.8	113.4	89.8	68.6	41.7	49.2	11.2	11.6	40.5
1961	426.0	280.5	114.0	89.9	69.6	44.4	52.4	11.8	12.0	42.3
1962	453.2	299.3	122.2	96.8	73.3	47.6	56.3	13.0	12.1	44.4
1963	476.3	314.8	127.4	100.7	76.8	50.7	60.0	14.0	11.9	45.7
1964	510.2	337.7	136.0	107.3	82.0	54.9	64.9	15.7	10.7	49.8
1965	552.0	363.7	146.6	115.7	87.9	59.4	69.9	17.8	13.0	52.1
1966	600.8	400.3	161.6	128.2	95.1	65.3	78.3	19.9	14.0	55.5
1967	644.5	428.9	169.0	134.3	101.6	72.0	86.4	21.7	12.7	58.4
1968	707.2	471.9	184.1	146.0	110.8	80.4	96.6	25.2	12.8	62.6
1969	772.9	518.3	200.4	157.7	121.7	90.6	105.5	28.5	14.6	64.7
1970	831.8	551.5	203.7	158.4	131.2	99.4	117.1	32.5	14.7	65.4
1971	894.0	583.9	209.1	160.5	140.4	107.9	126.5	36.7	15.5	71.4
1972	981.6	638.7	228.2	175.6	153.3	119.7	137.4	43.0	19.4	79.0
1973	1,101.7	708.7	255.9	196.6	170.3	133.9	148.7	49.2	33.7	85.3
1974	1,210.1	772.6	276.5	211.8	186.8	148.6	160.9	56.5	27.5	91.3
1975	1,313.4	814.6	277.1	211.6	198.1	163.4	176.0	65.9	25.4	100.0
1976	1,451.4	899.5	309.7	238.0	219.5	181.6	188.6	79.3	20.6	117.1
1977	1,607.5	993.9	346.1	266.7	242.7	202.8	202.3	94.1	20.5	132.4
1978	1,812.4	1,119.3	392.3	300.1	274.6	232.9	219.4	107.7	27.0	149.2
1979	2,034.0	1,252.1	441.4	334.8	307.8	266.8	236.1	122.7	31.7	160.1
1980	2,258.5	1,372.0	470.7	355.6	335.5	305.6	260.2	138.4	20.5	160.1
1981	2,520.9	1,510.3	512.2	386.7	366.8	346.9	284.4	150.3	30.7	156.1
1982	2,670.8	1,586.1	511.7	384.0	384.2	384.4	305.9	163.6	24.6	150.9
1983	2,838.6	1,676.6	523.1	397.4	404.2	425.1	324.3	173.6	12.4	178.4
1984	3,108.7	1,838.6	577.6	439.1	442.8	472.1	346.1	182.9	30.5	204.0
1985	3,325.3	1,975.4	608.9	460.9	473.2	521.3	372.0	187.6	30.2	225.6
1986	3,526.2	2,094.8	625.6	473.2	498.8	576.7	393.7	199.3	34.7	247.2
1987	3,766.4	2,249.7	649.9	490.3	531.8	648.5	419.4	209.4	42.8	280.6
1988	4,070.8	2,431.1	696.4	524.0	572.0	716.2	446.6	225.5	43.7	310.5
1989	4,384.3	2,573.2	720.6	541.8	604.7	771.4	476.6	241.9	48.6	330.7
1990 [p]	4,645.6	2,705.3	729.2	546.7	637.1	831.0	508.0	258.1	49.9	352.5
1982: IV	2,729.2	1,603.6	501.8	377.4	389.3	398.5	314.0	168.0	28.5	159.8
1983: IV	2,941.8	1,739.4	545.4	415.5	420.8	443.2	330.0	177.8	19.3	188.6
1984: IV	3,188.3	1,890.5	591.6	449.5	455.1	489.6	354.3	185.4	28.1	209.7
1985: IV	3,399.1	2,027.4	619.2	468.3	484.6	543.4	380.3	189.7	29.2	235.0
1986: IV	3,597.8	2,143.1	632.3	477.7	509.7	599.3	401.9	205.0	37.2	252.0
1987: IV	3,890.9	2,323.8	666.7	502.1	545.3	682.6	429.2	214.4	52.3	293.0
1988: I	3,951.3	2,359.3	679.6	512.0	554.6	687.9	437.2	218.6	47.1	299.2
II	4,033,4	2,409.9	691.8	519.7	567.9	707.1	443.2	222.8	48.8	308.1
III	4,112.3	2,456,1	701.8	527.5	578.6	726.0	449.7	228.0	43.4	313.2
IV	4,186.2	2,499.0	712.3	536.8	586.7	743.8	456.3	232.7	35.5	321.5
1989: I	4,302.2	2,533.7	719.2	541.8	594.6	753.2	466.6	236.5	59.6	328.2
II	4,362.9	2,560.0	719.3	541.4	602.6	764.9	473.2	239.9	50.5	329.1
III	4,402.8	2,586.6	722.3	543.2	607.1	777.4	479.9	243.5	38.7	329.5
IV	4,469.2	2,612.7	721.4	540.9	614.6	790.0	486.7	247.5	45.7	336.0
1990: I	4,562.8	2,651.6	724.6	541.2	627.0	802.9	497.1	252.8	57.4	346.6
II	4,622.2	2,696.3	731.1	548.1	637.3	822.2	505.7	256.4	51.0	350.8
III	4,678.5	2,734.2	735.3	551.8	642.7	844.9	511.3	260.0	42.4	355.6
IV [p]	4,719.0	2,739.1	725.6	545.6	641.5	853.9	518.1	263.2	48.9	357.2

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[1] The total of wage and salary disbursements and other labor income differs from compensation of employees in Table B–24 in that it excludes employer contributions for social insurance and the excess of wage accruals over wage disbursements.

See next page for continuation of table.

TABLE B–25.—*Sources of personal income, 1929–90*—Continued

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Rental income of persons with capital consumption adjustment	Personal dividend income	Personal interest income	Transfer payments							Less: Personal contributions for social insurance	Nonfarm personal income [2]
				Total	Old-age, survivors, disability, and health insurance benefits	Government unemployment insurance benefits	Veterans benefits	Government employees retirement benefits	Aid to families with dependent children (AFDC)	Other		
1929	4.9	5.8	6.9	1.5	......	......	0.6	0.1	......	0.8	0.1	......
1933	2.0	2.0	5.5	2.1	......	......	.6	.2	......	1.4	.2	......
1939	2.6	3.8	5.3	3.0	0.0	0.4	.5	.3	......	1.7	.6	......
1940	2.7	4.0	5.3	3.1	.0	.5	.5	.3	......	1.7	.7	......
1941	3.2	4.4	5.3	3.1	.1	.4	.5	.3	......	1.8	.8	......
1942	4.1	4.3	5.2	3.1	.1	.4	.5	.3	......	1.8	1.2	......
1943	4.6	4.4	5.1	3.0	.2	.1	.5	.4	......	1.8	1.8	......
1944	4.8	4.6	5.2	3.6	.2	.1	1.0	.4	......	2.0	2.2	......
1945	5.0	4.6	5.8	6.2	.3	.4	3.0	.5	......	2.0	2.3	......
1946	5.8	5.6	6.6	11.3	.4	1.1	7.0	.7	......	2.1	2.0	159.9
1947	5.8	6.3	7.5	11.7	.5	.8	7.0	.7	0.3	2.5	2.1	172.0
1948	6.4	7.0	8.0	11.3	.6	.9	5.9	.7	.4	2.9	2.2	188.3
1949	6.7	7.2	8.7	12.5	.7	1.9	5.3	.9	.5	3.3	2.2	190.6
1950	7.7	8.8	9.6	15.2	1.0	1.5	7.7	1.0	.6	3.5	2.9	211.2
1951	8.3	8.5	10.4	12.6	1.9	.9	4.6	1.1	.6	3.6	3.4	237.1
1952	9.4	8.5	11.2	13.3	2.2	1.1	4.3	1.2	.5	3.9	3.8	255.4
1953	10.7	8.8	12.4	14.3	3.0	1.0	4.1	1.4	.5	4.2	4.0	274.2
1954	11.6	9.1	13.7	16.3	3.6	2.2	4.2	1.5	.6	4.2	4.6	277.5
1955	12.0	10.3	14.9	17.7	4.9	1.5	4.4	1.7	.6	4.5	5.2	299.6
1956	12.4	11.1	16.6	18.9	5.7	1.5	4.4	1.9	.6	4.8	5.8	322.8
1957	13.1	11.5	18.7	21.8	7.3	1.9	4.5	2.2	.7	5.2	6.7	341.9
1958	13.9	11.3	20.3	26.3	8.5	4.1	4.7	2.5	.8	5.7	6.9	350.4
1959	14.6	12.2	22.3	27.4	10.2	2.8	4.6	2.8	.9	6.2	7.9	376.2
1960	15.3	12.9	24.9	29.5	11.1	3.0	4.6	3.1	1.0	6.7	9.3	393.9
1961	15.8	13.3	26.3	33.5	12.6	4.3	5.0	3.4	1.1	7.1	9.7	409.9
1962	16.5	14.4	28.9	34.7	14.3	3.1	4.7	3.7	1.3	7.6	10.3	436.7
1963	17.1	15.5	32.2	36.9	15.2	3.0	4.8	4.2	1.4	8.3	11.8	460.0
1964	17.3	17.3	35.5	38.7	16.0	2.7	4.7	4.7	1.5	9.1	12.6	494.9
1965	18.1	19.1	39.6	41.9	18.1	2.3	4.9	5.2	1.7	9.8	13.3	534.0
1966	18.6	19.4	44.2	46.6	20.8	1.9	4.9	6.1	1.9	11.2	17.8	581.5
1967	19.6	20.2	48.2	55.5	25.5	2.2	5.6	6.9	2.3	13.0	20.6	626.3
1968	18.4	21.9	53.2	64.0	30.2	2.1	5.9	7.6	2.8	15.3	22.9	688.7
1969	18.4	22.4	60.9	71.4	32.9	2.2	6.7	8.7	3.5	17.3	26.2	752.1
1970	18.2	22.2	69.3	85.9	38.5	4.0	7.7	10.2	4.8	20.7	27.9	810.4
1971	18.6	22.6	74.7	101.5	44.5	5.8	8.8	11.8	6.2	24.5	30.7	871.8
1972	17.9	24.1	80.8	113.3	49.6	5.7	9.7	13.8	6.9	27.6	34.5	955.0
1973	18.0	26.6	93.3	129.6	60.4	4.4	10.4	16.0	7.2	31.2	42.6	1,059.7
1974	16.1	28.9	111.9	153.2	70.1	6.8	11.8	19.0	7.9	37.5	47.9	1,172.6
1975	13.5	28.7	122.5	193.1	81.4	17.6	14.5	22.7	9.2	47.6	50.4	1,276.9
1976	11.9	33.8	134.1	210.7	92.9	15.8	14.4	26.1	10.1	51.5	55.5	1,417.9
1977	8.2	38.2	155.4	226.1	104.9	12.7	13.8	29.0	10.6	55.1	61.2	1,572.6
1978	9.3	43.0	182.5	244.0	116.2	9.7	13.9	32.7	10.7	60.9	69.8	1,769.3
1979	5.6	48.1	221.5	273.1	131.8	9.8	14.4	36.9	11.0	69.1	81.0	1,983.2
1980	6.6	52.9	271.9	324.7	154.2	16.1	15.0	43.0	12.4	84.0	88.6	2,215.8
1981	13.3	61.3	335.4	368.1	182.0	15.9	16.1	49.4	13.0	91.8	104.5	2,465.6
1982	13.6	63.9	369.7	410.6	204.5	25.2	16.4	54.6	13.3	96.5	112.3	2,618.7
1983	13.2	68.7	393.1	442.6	221.7	26.3	16.6	58.7	14.2	105.1	120.1	2,799.0
1984	8.5	75.5	444.7	456.6	235.7	15.8	16.4	61.4	14.8	112.6	132.7	3,052.1
1985	9.2	78.7	478.0	489.8	253.4	15.7	16.7	66.8	15.4	121.9	149.3	3,271.3
1986	11.6	85.8	493.2	521.5	269.2	16.3	16.7	70.9	16.4	131.9	161.9	3,469.4
1987	13.7	91.8	501.3	549.9	282.9	14.5	16.6	76.2	16.7	143.0	172.9	3,702.2
1988	16.3	102.2	547.9	587.7	300.5	13.4	16.9	84.0	17.3	155.6	194.1	4,006.0
1989	8.2	114.4	643.2	636.9	325.3	14.7	17.3	90.1	18.0	171.6	212.8	4,314.6
1990 ᵖ	6.7	123.8	680.9	694.6	350.7	18.1	17.9	96.9	19.7	191.3	226.2	4,574.4
1982: IV	15.8	65.4	366.2	435.4	216.6	31.8	16.6	56.1	13.6	100.6	113.5	2,672.8
1983: IV	12.4	71.0	411.6	445.5	227.0	20.0	16.5	60.2	14.5	107.3	123.6	2,895.6
1984: IV	5.6	76.8	464.4	463.0	241.7	15.6	16.3	58.5	14.8	116.1	135.2	3,134.7
1985: IV	7.8	79.0	485.9	497.5	257.0	15.2	16.5	67.9	15.8	125.0	152.6	3,346.9
1986: IV	13.5	87.7	492.7	531.2	273.3	16.7	16.4	72.6	16.7	135.4	164.6	3,538.9
1987: IV	14.6	95.5	516.3	557.4	285.8	13.4	16.6	78.1	16.7	146.8	176.3	3,817.3
1988: I	16.1	97.9	523.5	579.0	297.8	13.9	16.9	82.0	17.0	151.4	189.4	3,883.0
II	15.3	100.2	536.3	584.5	299.0	13.5	16.9	84.1	17.1	153.9	192.5	3,963.5
III	17.0	103.8	556.2	590.2	301.3	13.4	16.9	84.3	17.3	157.0	195.5	4,047.9
IV	16.8	107.1	575.6	596.9	303.9	13.0	16.8	85.6	17.6	160.1	198.9	4,129.7
1989: I	13.3	110.6	610.4	619.5	316.7	13.9	17.4	88.6	17.6	165.4	209.6	4,221.6
II	9.7	113.2	642.1	630.2	321.9	14.3	17.3	89.5	17.7	169.5	212.0	4,291.4
III	5.8	115.7	655.2	641.8	328.3	14.9	17.3	90.4	18.0	172.8	214.0	4,343.1
IV	4.1	118.2	664.9	655.9	334.1	15.5	17.3	92.0	18.5	178.6	215.8	4,402.4
1990: I	5.5	120.5	670.5	680.9	347.2	16.3	17.9	96.1	19.1	184.2	222.9	4,484.3
II	4.3	122.9	678.0	686.7	347.6	17.3	17.9	96.0	19.6	188.2	224.1	4,549.9
III	8.4	124.9	685.3	696.4	351.1	18.2	17.9	96.9	19.9	192.4	228.6	4,614.7
IV ᵖ	8.5	126.7	690.1	714.3	356.8	20.7	18.0	98.4	20.3	200.1	229.0	4,648.6

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[2] Personal income exclusive of the farm component of wages and salaries, other labor income, proprietors' income, and net interest.

Note.—The industry classification of wage and salary disbursements and proprietors' income is on an establishment basis and is based on the 1972 Standard Industrial Classification (SIC) beginning 1948 and on the 1942 SIC prior to 1948.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–26.—*Disposition of personal income, 1929–90*

[Billions of dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Personal income	Less: Personal tax and nontax payments	Equals: Disposable personal income	Less: Personal outlays				Equals: Personal saving	Percent of disposable personal income		
				Total	Personal consumption expenditures	Interest paid by consumers to business	Personal transfer payments to foreigners (net)		Personal outlays		Personal saving
									Total	Personal consumption expenditures	
1929	84.3	2.6	81.7	79.2	77.3	1.5	0.3	2.6	96.8	94.5	3.2
1933	46.3	1.4	44.9	46.5	45.8	.5	.2	−1.6	103.6	102.1	−3.6
1939	72.1	2.4	69.7	67.9	67.0	.7	.2	1.8	97.4	96.2	2.6
1940	77.6	2.6	75.0	72.0	71.0	.8	.2	3.0	96.0	94.7	4.0
1941	95.2	3.3	91.9	81.9	80.8	.9	.2	10.0	89.1	87.9	10.9
1942	122.4	5.9	116.4	89.5	88.6	.7	.1	27.0	76.8	76.1	23.2
1943	150.7	17.8	132.9	100.2	99.5	.5	.2	32.7	75.4	74.8	24.6
1944	164.5	18.9	145.6	109.0	108.2	.5	.4	36.5	74.9	74.4	25.1
1945	170.0	20.8	149.2	120.5	119.6	.5	.5	28.7	80.8	80.2	19.2
1946	177.6	18.7	158.9	145.3	143.9	.7	.7	13.6	91.4	90.6	8.6
1947	190.2	21.4	168.8	163.6	161.9	1.0	.7	5.2	96.9	95.9	3.1
1948	209.2	21.0	188.1	177.0	174.9	1.4	.7	11.1	94.1	93.0	5.9
1949	206.4	18.5	187.9	180.6	178.3	1.7	.5	7.4	96.1	94.9	3.9
1950	228.1	20.6	207.5	194.8	192.1	2.3	.4	12.6	93.9	92.6	6.1
1951	256.5	28.9	227.6	211.0	208.1	2.5	.4	16.6	92.7	91.4	7.3
1952	273.8	34.0	239.8	222.4	219.1	2.9	.4	17.4	92.7	91.4	7.3
1953	290.5	35.5	255.1	236.7	232.6	3.6	.5	18.4	92.8	91.2	7.2
1954	293.0	32.5	260.5	244.1	239.8	3.8	.5	16.4	93.7	92.0	6.3
1955	314.2	35.4	278.8	262.8	257.9	4.4	.4	16.0	94.2	92.5	5.8
1956	337.2	39.7	297.5	276.2	270.6	5.1	.5	21.3	92.8	90.9	7.2
1957	356.3	42.4	313.9	291.2	285.3	5.5	.5	22.7	92.8	90.9	7.2
1958	367.1	42.2	324.9	300.6	294.6	5.6	.4	24.3	92.5	90.7	7.5
1959	390.7	46.1	344.6	322.8	316.3	6.1	.4	21.8	93.7	91.8	6.3
1960	409.4	50.5	358.9	338.1	330.7	7.0	.4	20.8	94.2	92.1	5.8
1961	426.0	52.2	373.8	348.9	341.1	7.3	.5	24.9	93.4	91.3	6.6
1962	453.2	57.0	396.2	370.2	361.9	7.8	.5	25.9	93.5	91.4	6.5
1963	476.3	60.5	415.8	391.2	381.7	8.8	.6	24.6	94.1	91.8	5.9
1964	510.2	58.8	451.4	419.9	409.3	9.9	.7	31.5	93.0	90.7	7.0
1965	552.0	65.2	486.8	452.5	440.7	11.1	.7	34.3	93.0	90.5	7.0
1966	600.8	74.9	525.9	489.9	477.3	12.0	.7	36.0	93.2	90.8	6.8
1967	644.5	82.4	562.1	516.9	503.6	12.5	.9	45.1	92.0	89.6	8.0
1968	707.2	97.7	609.6	567.1	552.5	13.8	.9	42.5	93.0	90.6	7.0
1969	772.9	116.3	656.7	614.5	597.9	15.6	1.0	42.2	93.6	91.0	6.4
1970	831.8	116.2	715.6	657.9	640.0	16.7	1.2	57.7	91.9	89.4	8.1
1971	894.0	117.3	776.8	710.5	691.6	17.7	1.2	66.3	91.5	89.0	8.5
1972	981.6	142.0	839.6	778.2	757.6	19.5	1.1	61.4	92.7	90.2	7.3
1973	1,101.7	152.0	949.8	860.8	837.2	22.3	1.3	89.0	90.6	88.2	9.4
1974	1,210.1	171.8	1,038.4	941.7	916.5	24.1	1.0	96.7	90.7	88.3	9.3
1975	1,313.4	170.6	1,142.8	1,038.2	1,012.8	24.4	1.0	104.6	90.8	88.6	9.2
1976	1,451.4	198.7	1,252.6	1,156.9	1,129.3	26.6	1.0	95.8	92.4	90.2	7.6
1977	1,607.5	228.1	1,379.3	1,288.6	1,257.2	30.5	.9	90.7	93.4	91.1	6.6
1978	1,812.4	261.1	1,551.2	1,441.1	1,403.5	36.7	.9	110.2	92.9	90.5	7.1
1979	2,034.0	304.7	1,729.3	1,611.3	1,566.8	43.5	1.0	118.1	93.2	90.6	6.8
1980	2,258.5	340.5	1,918.0	1,781.1	1,732.6	47.4	1.1	136.9	92.9	90.3	7.1
1981	2,520.9	393.3	2,127.6	1,968.1	1,915.1	52.0	1.0	159.4	92.5	90.0	7.5
1982	2,670.8	409.3	2,261.4	2,107.5	2,050.7	55.5	1.3	153.9	93.2	90.7	6.8
1983	2,838.6	410.5	2,428.1	2,297.4	2,234.5	61.9	1.0	130.6	94.6	92.0	5.4
1984	3,108.7	440.2	2,668.6	2,504.5	2,430.5	72.5	1.5	164.1	93.9	91.1	6.1
1985	3,325.3	486.6	2,838.7	2,713.3	2,629.0	82.6	1.7	125.4	95.6	92.6	4.4
1986	3,526.2	512.9	3,013.3	2,888.5	2,797.4	89.1	1.9	124.9	95.9	92.8	4.1
1987	3,766.4	571.6	3,194.7	3,102.2	3,009.4	90.7	2.2	92.5	97.1	94.2	2.9
1988	4,070.8	591.6	3,479.2	3,333.6	3,238.2	93.6	1.9	145.6	95.8	93.1	4.2
1989	4,384.3	658.8	3,725.5	3,553.7	3,450.1	102.2	1.4	171.8	95.4	92.6	4.6
1990 [p]	4,645.6	699.8	3,945.8	3,766.8	3,658.1	107.8	.9	179.1	95.5	92.7	4.5
1982: IV	2,729.2	411.1	2,318.1	2,174.9	2,117.0	56.8	1.1	143.1	93.8	91.3	6.2
1983: IV	2,941.8	413.9	2,527.9	2,382.5	2,315.8	65.5	1.2	145.4	94.2	91.6	5.8
1984: IV	3,188.3	459.7	2,728.6	2,571.3	2,493.4	76.3	1.6	157.3	94.2	91.4	5.8
1985: IV	3,399.1	499.6	2,899.5	2,787.7	2,700.4	85.9	1.4	111.7	96.1	93.1	3.9
1986: IV	3,597.8	534.4	3,063.4	2,961.4	2,868.5	90.9	2.1	102.0	96.7	93.6	3.3
1987: IV	3,890.9	588.6	3,302.3	3,172.6	3,079.1	91.3	2.1	129.7	96.1	93.2	3.9
1988: I	3,951.3	572.7	3,378.6	3,242.2	3,147.7	92.4	2.1	136.4	96.0	93.2	4.0
II	4,033.4	594.0	3,439.4	3,298.6	3,204.3	92.6	1.8	140.7	95.9	93.2	4.1
III	4,112.3	592.2	3,520.1	3,363.2	3,268.2	93.4	1.6	156.9	95.5	92.8	4.5
IV	4,186.2	607.3	3,578.9	3,430.4	3,332.6	95.9	1.9	148.5	95.9	93.1	4.1
1989: I	4,302.2	640.5	3,661.7	3,472.0	3,371.7	98.6	1.7	189.8	94.8	92.1	5.2
II	4,362.9	665.5	3,697.3	3,528.5	3,425.9	101.0	1.6	168.9	95.4	92.7	4.6
III	4,402.8	659.5	3,743.4	3,588.8	3,484.3	103.4	1.2	154.5	95.9	93.1	4.1
IV	4,469.2	669.6	3,799.6	3,625.5	3,518.5	105.7	1.2	174.1	95.4	92.6	4.6
1990: I	4,562.8	675.1	3,887.7	3,696.4	3,588.1	107.4	.9	191.3	95.1	92.3	4.9
II	4,622.2	696.5	3,925.7	3,730.6	3,622.7	107.5	.4	195.1	95.0	92.3	5.0
III	4,678.5	709.5	3,969.1	3,802.6	3,693.4	107.9	1.3	166.5	95.8	93.1	4.2
IV [p]	4,719.0	718.1	4,000.9	3,837.4	3,728.1	108.3	1.1	163.5	95.9	93.2	4.1

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–27.—*Total and per capita disposable personal income and personal consumption expenditures in current and 1982 dollars, 1929–90*

[Quarterly data at seasonally adjusted annual rates, except as noted]

Year or quarter	Disposable personal income				Personal consumption expenditures				Population (thousands) [1]
	Total (billions of dollars)		Per capita (dollars)		Total (billions of dollars)		Per capita (dollars)		
	Current dollars	1982 dollars	Current dollars	1982 dollars	Current dollars	1982 dollars	Current dollars	1982 dollars	
1929	81.7	498.6	671	4,091	77.3	471.4	634	3,868	121,878
1933	44.9	370.8	357	2,950	45.8	378.7	365	3,013	125,690
1939	69.7	499.5	532	3,812	67.0	480.5	511	3,667	131,028
1940	75.0	530.7	568	4,017	71.0	502.6	538	3,804	132,122
1941	91.9	604.1	689	4,528	80.8	531.1	606	3,981	133,402
1942	116.4	693.0	863	5,138	88.6	527.6	657	3,912	134,860
1943	132.9	721.4	972	5,276	99.5	539.9	727	3,949	136,739
1944	145.6	749.3	1,052	5,414	108.2	557.1	782	4,026	138,397
1945	149.2	739.5	1,066	5,285	119.6	592.7	855	4,236	139,928
1946	158.9	723.3	1,124	5,115	143.9	655.0	1,018	4,632	141,389
1947	168.8	694.8	1,171	4,820	161.9	666.6	1,123	4,625	144,126
1948	188.1	733.1	1,283	5,000	174.9	681.8	1,193	4,650	146,631
1949	187.9	733.2	1,260	4,915	178.3	695.4	1,195	4,661	149,188
1950	207.5	791.8	1,368	5,220	192.1	733.2	1,267	4,834	151,684
1951	227.6	819.0	1,475	5,308	208.1	748.7	1,349	4,853	154,287
1952	239.8	844.3	1,528	5,379	219.1	771.4	1,396	4,915	156,954
1953	255.1	880.0	1,599	5,515	232.6	802.5	1,458	5,029	159,565
1954	260.5	894.0	1,604	5,505	239.8	822.7	1,477	5,066	162,391
1955	278.8	944.5	1,687	5,714	257.9	873.8	1,560	5,287	165,275
1956	297.5	989.4	1,769	5,881	270.6	899.8	1,608	5,349	168,221
1957	313.9	1,012.1	1,833	5,909	285.3	919.7	1,666	5,370	171,274
1958	324.9	1,028.8	1,865	5,908	294.6	932.9	1,692	5,357	174,141
1959	344.6	1,067.2	1,946	6,027	316.3	979.4	1,786	5,531	177,073
1960	358.9	1,091.1	1,986	6,036	330.7	1,005.1	1,829	5,561	180,760
1961	373.8	1,123.2	2,034	6,113	341.1	1,025.2	1,857	5,579	183,742
1962	396.2	1,170.2	2,123	6,271	361.9	1,069.0	1,940	5,729	186,590
1963	415.8	1,207.3	2,197	6,378	381.7	1,108.4	2,017	5,855	189,300
1964	451.4	1,291.0	2,352	6,727	409.3	1,170.6	2,133	6,099	191,927
1965	486.8	1,365.7	2,505	7,027	440.7	1,236.4	2,268	6,362	194,347
1966	525.9	1,431.3	2,675	7,280	477.3	1,298.9	2,428	6,607	196,599
1967	562.1	1,493.2	2,828	7,513	503.6	1,337.7	2,534	6,730	198,752
1968	609.6	1,551.3	3,037	7,728	552.5	1,405.9	2,752	7,003	200,745
1969	656.7	1,599.8	3,239	7,891	597.9	1,456.7	2,949	7,185	202,736
1970	715.6	1,668.1	3,489	8,134	640.0	1,492.0	3,121	7,275	205,089
1971	776.8	1,728.4	3,740	8,322	691.6	1,538.8	3,330	7,409	207,692
1972	839.6	1,797.4	4,000	8,562	757.6	1,621.9	3,609	7,726	209,924
1973	949.8	1,916.3	4,481	9,042	837.2	1,689.6	3,950	7,972	211,939
1974	1,038.4	1,896.6	4,855	8,867	916.5	1,674.0	4,285	7,826	213,898
1975	1,142.8	1,931.7	5,291	8,944	1,012.8	1,711.9	4,689	7,926	215,981
1976	1,252.6	2,001.0	5,744	9,175	1,129.3	1,803.9	5,178	8,272	218,086
1977	1,379.3	2,066.6	6,262	9,381	1,257.2	1,883.8	5,707	8,551	220,289
1978	1,551.2	2,167.4	6,968	9,735	1,403.5	1,961.0	6,304	8,808	222,629
1979	1,729.3	2,212.6	7,682	9,829	1,566.8	2,004.4	6,960	8,904	225,106
1980	1,918.0	2,214.3	8,421	9,722	1,732.6	2,000.4	7,607	8,783	227,754
1981	2,127.6	2,248.6	9,243	9,769	1,915.1	2,024.2	8,320	8,794	230,182
1982	2,261.4	2,261.5	9,724	9,725	2,050.7	2,050.7	8,818	8,818	232,549
1983	2,428.1	2,331.9	10,340	9,930	2,234.5	2,146.0	9,516	9,139	234,829
1984	2,668.6	2,469.8	11,257	10,419	2,430.5	2,249.3	10,253	9,489	237,051
1985	2,838.7	2,542.8	11,861	10,625	2,629.0	2,354.8	10,985	9,840	239,322
1986	3,013.3	2,635.3	12,469	10,905	2,797.4	2,446.4	11,576	10,123	241,660
1987	3,194.7	2,670.7	13,094	10,946	3,009.4	2,515.8	12,334	10,311	243,982
1988	3,479.2	2,800.5	14,123	11,368	3,238.2	2,606.5	13,144	10,580	246,358
1989	3,725.5	2,869.0	14,973	11,531	3,450.1	2,656.8	13,866	10,678	248,810
1990 p	3,945.8	2,893.3	15,695	11,508	3,658.1	2,682.2	14,550	10,668	251,413
1982: IV	2,318.1	2,276.1	9,929	9,749	2,117.0	2,078.7	9,068	8,904	233,466
1983: IV	2,527.9	2,392.7	10,725	10,151	2,315.8	2,191.9	9,825	9,299	235,707
1984: IV	2,728.6	2,496.3	11,467	10,491	2,493.4	2,281.1	10,479	9,587	237,946
1985: IV	2,899.5	2,562.8	12,068	10,667	2,700.4	2,386.9	11,240	9,935	240,257
1986: IV	3,063.4	2,646.2	12,629	10,909	2,868.5	2,477.8	11,825	10,214	242,579
1987: IV	3,302.3	2,717.9	13,483	11,097	3,079.1	2,534.2	12,572	10,347	244,925
1988: I	3,378.6	2,765.9	13,765	11,268	3,147.7	2,576.8	12,824	10,498	245,453
II	3,439.4	2,784.4	13,982	11,320	3,204.3	2,594.1	13,027	10,546	245.981
III	3,520.1	2,818.0	14,271	11,424	3,268.2	2,616.4	13,249	10,607	246,667
IV	3,578.9	2,833.9	14,470	11,458	3,332.6	2,638.8	13,474	10,669	247,329
1989: I	3,661.7	2,863.5	14,773	11,553	3,371.7	2,636.7	13,603	10,638	247,863
II	3,697.3	2,854.9	14,883	11,492	3,425.9	2,645.3	13,790	10,648	248,431
III	3,743.4	2,874.3	15.026	11,538	3,484.3	2,675.3	13,986	10,739	249,127
IV	3,799.6	2,883.2	15,210	11,541	3,518.5	2,669.9	14,084	10,687	249,818
1990: I	3,887.7	2,900.9	15,527	11,586	3,588.1	2,677.3	14,330	10,693	250,392
II	3,925.7	2,902.8	15,639	11,564	3,622.7	2,678.8	14,432	10,671	251,026
III	3,969.1	2,898.0	15,765	11,511	3,693.4	2,696.8	14,670	10,711	251,767
IV p	4,000.9	2,871.6	15,847	11,374	3,728.1	2,675.8	14,767	10,599	252,467

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[1] Population of the United States including Armed Forces overseas; includes Alaska and Hawaii beginning 1960. Annual data are for July 1 through 1958 and are averages of quarterly data beginning 1959. Quarterly data are averages for the period.

Source: Department of Commerce (Bureau of Economic Analysis and Bureau of the Census).

TABLE B–28.—*Gross saving and investment, 1929–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross saving								Gross investment			Statistical discrepancy
	Total	Gross private saving			Government surplus or deficit (−), national income and product accounts			Capital grants received by the United States (net)[2]	Total	Gross private domestic investment	Net foreign investment[3]	
		Total	Personal saving	Gross business saving[1]	Total	Federal	State and local					
1929	15.9	14.9	2.6	12.3	1.0	1.2	−0.2	......	17.4	16.7	0.8	1.5
1933	.6	1.9	−1.6	3.6	−1.4	−1.3	−.1	......	1.7	1.6	.2	1.2
1939	8.9	11.1	1.8	9.3	−2.2	−2.2	.0	......	10.6	9.5	1.0	1.7
1940	13.6	14.3	3.0	11.3	−.7	−1.3	.6	......	15.0	13.4	1.5	1.4
1941	18.8	22.6	10.0	12.6	−3.8	−5.1	1.3	......	19.5	18.3	1.3	.7
1942	10.9	42.3	27.0	15.3	−31.4	−33.1	1.8	......	10.2	10.3	−.1	−.7
1943	5.8	50.0	32.7	17.3	−44.2	−46.6	2.4	......	4.1	6.2	−2.1	−1.7
1944	3.0	54.9	36.5	18.4	−51.8	−54.5	2.7	......	5.8	7.7	−2.0	2.7
1945	5.9	45.4	28.7	16.8	−39.5	−42.1	2.6	......	10.0	11.3	−1.3	4.0
1946	35.7	30.3	13.6	16.7	5.4	3.5	1.9	......	36.4	31.5	4.9	.7
1947	42.5	28.1	5.2	23.0	14.4	13.4	1.0	......	44.3	35.0	9.3	1.8
1948	50.8	42.4	11.1	31.3	8.4	8.3	.1	......	49.6	47.1	2.4	−1.3
1949	36.5	39.9	7.4	32.5	−3.4	−2.6	−.7	......	37.3	36.5	.9	.8
1950	52.5	44.5	12.6	31.8	8.0	9.2	−1.2	......	53.2	55.1	−1.8	.8
1951	58.7	52.6	16.6	36.0	6.1	6.5	−.4	......	61.4	60.5	.9	2.7
1952	52.3	56.1	17.4	38.7	−3.8	−3.7	.0	......	54.2	53.5	.6	1.8
1953	51.0	58.0	18.4	39.6	−7.0	−7.1	.1	......	53.6	54.9	−1.3	2.6
1954	51.6	58.8	16.4	42.3	−7.1	−6.0	−1.1	......	54.3	54.1	.2	2.7
1955	68.4	65.2	16.0	49.2	3.1	4.4	−1.3	......	70.2	69.7	.4	1.8
1956	77.3	72.1	21.3	50.8	5.2	6.1	−.9	......	75.4	72.7	2.8	−1.9
1957	77.1	76.1	22.7	53.5	.9	2.3	−1.4	......	75.9	71.1	4.8	−1.2
1958	64.5	77.1	24.3	52.9	−12.6	−10.3	−2.4	......	64.5	63.6	.9	−.1
1959	80.5	82.1	21.8	60.3	−1.6	−1.1	−.4	......	79.0	80.2	−1.2	−1.5
1960	84.2	81.1	20.8	60.3	3.1	3.0	.1	......	81.4	78.2	3.2	−2.8
1961	82.6	86.8	24.9	62.0	−4.3	−3.9	−.4	......	81.3	77.1	4.2	−1.2
1962	91.4	95.2	25.9	69.3	−3.8	−4.2	.5	......	91.5	87.6	3.8	.0
1963	98.7	97.9	24.6	73.3	.7	.3	.5	......	98.1	93.1	4.9	−.6
1964	108.5	110.8	31.5	79.3	−2.3	−3.3	1.0	......	107.1	99.6	7.5	−1.4
1965	123.5	123.0	34.3	88.7	.5	.5	.0	......	122.3	116.2	6.2	−1.2
1966	130.3	131.6	36.0	95.6	−1.3	−1.8	.5	......	132.4	128.6	3.8	2.1
1967	129.5	143.8	45.1	98.6	−14.2	−13.2	−1.1	......	129.2	125.7	3.5	−.4
1968	139.7	145.7	42.5	103.3	−6.0	−6.0	.1	......	138.6	137.0	1.6	−1.1
1969	158.8	148.9	42.2	106.7	9.9	8.4	1.5	......	154.9	153.2	1.7	−3.9
1970	154.7	164.5	57.7	106.7	−10.6	−12.4	1.8	0.9	153.6	148.8	4.8	−1.1
1971	171.9	190.6	66.3	124.3	−19.5	−22.0	2.6	.7	173.7	172.5	1.3	1.8
1972	200.7	203.4	61.4	142.0	−3.4	−16.8	13.5	.7	199.1	202.0	−2.9	−1.6
1973	251.9	244.0	89.0	155.0	7.9	−5.6	13.5	0	247.6	238.8	8.8	−4.3
1974	247.9	254.3	96.7	157.6	−4.3	−11.6	7.2	[4] −2.0	246.2	240.8	5.4	−1.7
1975	238.7	303.6	104.6	198.9	−64.9	−69.4	4.5	0	241.2	219.6	21.6	2.5
1976	283.0	321.4	95.8	225.6	−38.4	−53.5	15.2	0	286.6	277.7	9.0	3.6
1977	335.4	354.5	90.7	263.8	−19.1	−46.0	26.9	0	335.3	344.1	−8.7	.0
1978	408.6	409.0	110.2	298.9	−.4	−29.3	28.9	0	406.7	416.8	−10.1	−1.9
1979	458.4	445.8	118.1	327.7	11.5	−16.1	27.6	1.1	457.4	454.8	2.6	−1.0
1980	445.0	478.4	136.9	341.5	−34.5	−61.3	26.8	1.2	450.0	437.0	13.0	4.9
1981	522.0	550.5	159.4	391.1	−29.7	−63.8	34.1	1.1	526.1	515.5	10.6	4.1
1982	446.4	557.1	153.9	403.2	−110.8	−145.9	35.1	0	446.3	447.3	−1.0	−.1
1983	463.6	592.2	130.6	461.6	−128.6	−176.0	47.5	0	468.8	502.3	−33.5	5.2
1984	568.5	673.5	164.1	509.5	−105.0	−169.6	64.6	0	573.9	664.8	−90.9	5.4
1985	533.5	665.3	125.4	539.9	−131.8	−196.9	65.1	0	528.7	643.1	−114.4	−4.8
1986	525.3	669.5	124.9	544.6	−144.1	−206.9	62.8	0	523.6	659.4	−135.8	−1.8
1987	555.5	662.6	92.5	570.2	−107.1	−158.2	51.0	0	544.9	699.5	−154.6	−10.6
1988	656.1	751.3	145.6	605.7	−95.3	−141.7	46.5	0	627.8	747.1	−119.2	−28.2
1989	691.5	779.3	171.8	607.5	−87.8	−134.3	46.4	0	674.4	771.2	−96.8	−17.0
1990[p]	657.9	783.9	179.1	604.8	−126.0	−161.3	35.4	0	654.8	745.0	−90.1	−3.1
1982: IV	387.4	554.2	143.1	411.1	−166.8	−202.6	35.8	0	394.2	409.6	−15.4	6.8
1983: IV	519.9	632.8	145.4	487.3	−112.9	−169.2	56.4	0	522.4	579.8	−57.4	2.5
1984: IV	557.8	679.9	157.3	522.6	−122.1	−187.5	65.4	0	555.7	661.8	−106.1	−2.1
1985: IV	520.3	666.3	111.7	554.5	−145.9	−212.2	66.3	0	512.4	654.1	−141.6	−7.9
1986: IV	510.0	641.2	102.0	539.2	−131.3	−189.0	57.8	0	500.3	648.8	−148.5	−9.6
1987: IV	600.5	715.2	129.7	585.5	−114.7	−161.7	46.9	0	581.7	741.4	−159.7	−18.8
1988: I	630.4	738.5	136.4	602.1	−108.2	−153.7	45.5	0	605.7	729.2	−123.5	−24.7
II	653.8	742.4	140.7	601.6	−88.6	−136.9	48.3	0	629.9	746.0	−116.1	−23.9
III	684.7	758.0	156.9	601.1	−73.3	−120.1	46.8	0	650.8	765.6	−114.8	−33.9
IV	655.4	766.4	148.5	617.9	−111.0	−156.3	45.2	0	624.9	747.5	−122.5	−30.5
1989: I	700.6	784.4	189.8	594.6	−83.7	−132.6	48.9	0	672.1	769.7	−97.6	−28.6
II	697.9	770.3	168.9	601.5	−72.4	−122.7	50.3	0	677.6	776.7	−99.1	−20.3
III	692.4	776.0	154.5	621.4	−83.6	−131.7	48.1	0	676.1	775.8	−99.7	−16.2
IV	674.8	786.4	174.1	612.3	−111.6	−150.1	38.5	0	671.8	762.7	−90.9	−3.0
1990: I	664.8	795.0	191.3	603.7	−130.2	−168.3	38.1	0	665.6	747.2	−81.6	.7
II	679.3	806.7	195.1	611.6	−127.3	−166.0	38.6	0	676.1	759.0	−82.9	−3.2
III	665.9	772.2	166.5	605.8	−106.4	−145.7	39.3	0	661.0	759.7	−98.7	−4.9
IV[p]	......	......	163.5	......	......	......	......	0	616.7	714.0	−97.3	......

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[1] Undistributed corporate profits with inventory valuation and capital consumption adjustments, corporate and noncorporate capital consumption allowances with capital consumption adjustment, and private wage accruals less disbursements.

[2] Consists mainly of allocations of special drawing rights (SDRs).

[3] Net exports of goods and services less net transfers to foreigners and interest paid by government to foreigners plus capital grants received by the United States, net.

[4] Consists of a U.S. payment to India under the Agricultural Trade Development and Assistance Act. This payment is included in capital grants received by the United States, net.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–29.—*Saving by individuals, 1946–90*[1]

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Total	Increase in financial assets									Net investment in tangible assets[7]			Less: Net increase in debt		
						Securities										
		Total	Checkable deposits and currency	Time and savings deposits	Money market fund shares	Government securities[2]	Corporate equities[3]	Other securities[4]	Insurance and pension reserves[5]	Other financial assets[6]	Owner-occupied homes	Consumer durables	Noncorporate business assets[8]	Mortgage debt on nonfarm homes	Consumer credit	Other debt[8] [9]
1946	24.9	19.5	5.6	6.3	....	−1.5	1.2	−0.8	5.1	3.7	3.8	6.7	2.0	4.0	2.9	0.2
1947	19.5	12.5	.0	3.5	....	.5	1.1	−.7	5.4	2.6	7.0	9.4	1.3	4.9	3.5	2.4
1948	25.0	8.9	−2.9	2.3	....	1.0	1.0	.1	5.3	2.1	9.5	10.2	6.9	4.8	3.1	2.6
1949	20.7	8.8	−2.0	2.6	....	.5	.7	−.2	5.6	1.6	8.7	10.9	2.0	4.4	3.1	2.3
1950	31.8	14.9	2.7	2.4	....	.9	.7	−.7	6.1	2.9	12.1	14.9	7.2	7.1	4.6	5.7
1951	35.0	18.9	4.6	4.8	....	−.6	1.8	.3	6.3	1.6	12.1	11.4	4.4	6.6	1.4	3.8
1952	35.9	28.7	1.6	7.8	....	7.4	1.5	.0	7.7	2.8	11.7	8.7	1.9	6.4	5.2	3.5
1953	34.3	24.7	.9	8.2	....	3.7	1.0	.5	7.9	2.4	12.7	10.3	.8	7.6	4.1	2.5
1954	27.4	21.2	2.1	9.2	....	.2	.7	−.8	7.8	2.0	13.1	7.0	1.7	9.0	1.4	5.3
1955	36.1	28.6	1.2	8.6	....	6.4	1.1	1.0	8.5	1.7	17.3	12.7	2.9	12.3	7.0	6.1
1956	38.5	31.8	1.9	9.4	....	4.6	2.0	1.1	9.5	3.4	16.2	8.8	1.0	11.0	3.6	4.6
1957	38.0	28.8	−.4	11.9	....	3.7	1.5	.8	9.5	1.9	13.8	7.9	2.1	8.8	2.6	3.2
1958	35.1	32.5	3.7	13.9	....	−2.6	1.8	1.0	10.4	4.3	12.8	3.7	2.9	9.6	.3	6.9
1959	36.8	34.5	.9	11.0	....	8.4	.6	−.2	11.9	1.9	17.0	7.7	4.3	12.9	7.7	6.1
1960	37.4	32.7	.9	12.2	....	2.1	.0	2.3	11.5	3.7	15.7	7.3	3.2	11.4	4.0	6.1
1961	36.9	35.5	−1.0	18.3	....	.8	1.1	−.2	12.1	4.3	13.5	4.5	4.9	12.3	2.2	7.0
1962	43.2	39.7	−1.2	26.1	....	1.1	−1.4	−.4	13.0	2.5	14.0	8.6	7.0	13.9	5.9	6.4
1963	46.7	45.4	4.2	26.2	....	−.8	−1.6	1.3	13.9	2.1	15.5	11.9	9.2	16.6	8.5	10.1
1964	56.6	54.9	5.2	26.3	....	3.9	−.3	.3	16.4	3.1	15.7	15.1	8.8	17.4	9.5	11.1
1965	65.7	58.7	7.6	27.9	....	3.9	−1.6	.8	17.0	3.1	15.3	20.2	12.4	17.1	10.1	13.7
1966	76.5	60.9	2.4	19.1	....	13.7	−.1	2.4	19.3	4.1	14.5	23.2	9.9	13.4	5.9	12.5
1967	79.0	70.1	9.9	35.4	....	−2.5	−3.3	5.2	18.8	6.7	12.6	21.3	10.7	12.9	5.1	17.6
1968	79.5	71.6	11.2	30.9	....	2.3	−6.2	7.8	19.9	5.7	17.0	26.9	10.0	17.2	10.8	18.1
1969	73.9	67.0	−2.4	8.9	....	27.0	−2.2	10.0	21.8	3.9	17.2	26.2	13.3	18.3	10.1	21.5
1970	89.6	80.7	8.7	43.5	....	−5.7	−.7	6.9	24.2	3.9	14.6	19.9	13.1	13.5	4.6	20.6
1971	99.6	105.5	12.2	67.7	....	−11.0	−4.3	6.7	28.0	6.2	22.3	25.7	19.5	26.2	14.1	33.2
1972	118.9	134.6	13.4	74.0	....	−.5	−8.8	−1.0	48.5	9.2	29.2	34.8	26.6	38.8	19.0	48.4
1973	157.4	148.4	13.1	63.5	....	18.6	−4.3	9.1	39.9	8.4	33.1	41.2	31.9	44.2	23.0	30.0
1974	120.0	147.1	6.3	56.2	2.4	17.8	−2.1	13.5	43.7	9.3	27.9	29.9	14.9	34.6	9.0	56.2
1975	159.1	176.4	6.0	77.6	1.3	17.6	−6.2	−2.1	71.9	10.1	27.5	28.4	7.5	38.8	8.0	33.9
1976	164.0	206.1	15.6	107.1	.0	8.6	−.5	2.2	56.6	16.6	41.9	42.9	2.7	60.8	22.9	45.9
1977	190.3	253.4	19.7	106.6	−.2	13.4	−7.3	17.2	78.6	25.4	61.0	53.3	15.2	91.5	36.7	64.4
1978	198.8	285.7	22.0	99.6	6.0	32.1	−12.5	8.7	95.0	34.9	77.8	58.8	18.9	109.4	45.1	87.9
1979	204.3	326.9	35.8	74.4	30.6	66.0	−25.5	4.8	101.8	38.8	86.7	54.0	12.4	117.1	40.5	118.2
1980	203.3	320.2	9.2	124.9	24.5	33.8	−11.2	−14.9	118.5	35.4	66.6	31.9	−6.2	96.4	2.6	110.2
1981	246.8	321.7	36.2	72.0	90.7	42.6	−37.7	−9.0	117.9	8.8	59.7	37.4	19.5	73.8	16.9	100.8
1982	258.5	374.4	24.1	119.7	32.8	70.0	−15.8	−25.8	148.0	21.3	35.6	37.2	−4.0	52.9	16.4	115.4
1983	322.2	494.0	32.9	201.8	−31.1	100.9	−3.0	4.5	159.2	28.9	76.2	62.7	−11.6	120.4	48.9	129.8
1984	381.8	554.4	21.4	229.6	44.0	123.5	−57.9	−.6	157.7	36.6	95.4	98.8	14.4	136.7	81.7	163.0
1985	344.2	566.0	32.5	133.0	8.7	120.9	−37.7	54.9	186.7	67.0	97.1	117.6	1.0	157.0	82.5	198.0
1986	405.5	557.3	97.4	114.8	39.6	−34.5	15.0	67.2	169.7	88.2	114.6	125.4	3.2	216.8	58.0	120.2
1987	346.4	484.5	7.3	108.4	28.1	131.7	−34.1	33.4	163.9	45.9	134.0	118.0	−17.8	234.0	33.5	104.9
1988	443.4	578.9	9.7	167.3	23.5	186.5	−118.1	36.6	206.3	67.1	151.4	133.8	−26.8	230.9	50.2	112.8
1989	444.9	546.4	24.3	117.0	81.2	173.5	−88.0	2.2	174.7	61.4	161.9	133.9	−40.9	219.8	39.1	97.5
1988: I	430.8	549.9	39.0	187.3	54.7	137.8	−77.8	−40.2	186.7	62.4	146.9	131.6	−19.8	194.3	57.1	126.4
II	409.7	585.0	−4.3	170.1	−25.7	163.5	−128.2	118.8	203.3	87.5	150.0	132.2	−22.2	287.3	50.3	97.6
III	544.6	694.2	−18.8	198.0	1.6	281.5	−76.7	54.1	179.2	75.4	154.2	128.4	−20.9	231.7	42.3	137.3
IV	388.4	486.5	22.9	113.7	63.6	163.3	−189.8	13.7	256.0	43.1	154.9	143.0	−44.6	210.5	51.2	89.8
1989: I	416.6	536.6	16.3	98.9	35.0	279.5	−165.5	21.9	185.9	64.6	159.3	132.1	−21.6	225.2	38.2	126.4
II	476.2	560.7	−25.0	152.5	115.4	134.6	−37.3	10.8	135.4	74.2	160.0	135.0	−34.9	211.8	36.9	95.9
III	498.4	582.8	13.0	131.1	111.1	240.6	−82.4	20.1	109.7	39.7	164.0	144.3	−51.1	224.3	37.1	80.2
IV	388.2	505.3	93.0	85.4	63.2	39.5	−66.8	−44.2	267.9	67.3	164.4	124.1	−56.2	217.9	44.1	87.3
1990: I	566.6	675.2	9.8	99.2	66.3	255.9	−57.2	62.8	194.6	43.8	168.9	140.8	−38.3	238.3	14.6	127.2
II	503.5	562.6	22.0	−10.9	7.3	222.5	−43.8	52.9	268.9	43.7	163.1	122.8	−54.8	226.0	9.8	54.3
III	452.1	571.9	60.7	−43.0	119.5	262.5	−39.8	−46.1	213.5	44.6	155.7	122.1	−62.2	208.0	27.7	99.6

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[1] Saving by households, personal trust funds, nonprofit institutions, farms, and other noncorporate business.

[2] Consists of U.S. savings bonds, other U.S. Treasury securities, U.S. Government agency securities and sponsored agency securities, mortgage pool securities, and State and local obligations.

[3] Includes mutual fund shares.

[4] Corporate and foreign bonds and open-market paper.

[5] Private life insurance reserves, private insured and noninsured pension reserves, and government insurance and pension reserves.

[6] Consists of security credit, mortgages, accident and health insurance reserves, and nonlife insurance claims for households and of consumer credit, equity in sponsored agencies, and nonlife insurance claims for noncorporate business.

[7] Purchases of physical assets less depreciation.

[8] Includes data for corporate farms.

[9] Other debt consists of security credit, U.S. Government and policy loans, and noncorporate business debt.

Source: Board of Governors of the Federal Reserve System.

TABLE B-30.—*Number and median income (in 1989 dollars) of families and persons, and poverty status, by race, 1970–89*

Year	Families [1]						Persons below poverty level		Median income of persons 15 years old and over with income [2]			
	Number (millions)	Median income	Below poverty level				Number (millions)	Rate	Males		Females	
			Total		Female householder				All persons	Year-round full-time workers	All persons	Year-round full-time workers
			Number (millions)	Rate	Number (millions)	Rate						
ALL RACES												
1970	52.2	$31,534	5.3	10.1	2.0	32.5	25.4	12.6	$21,316	$29,351	$7,149	$17,386
1971	53.3	31,490	5.3	10.0	2.1	33.9	25.6	12.5	21,135	29,488	7,373	17,455
1972	54.4	32,976	5.1	9.3	2.2	32.7	24.5	11.9	22,100	31,261	7,710	17,956
1973	55.1	33,656	4.8	8.8	2.2	32.2	23.0	11.1	22,499	32,028	7,890	18,120
1974 [3]	55.7	32,451	4.9	8.8	2.3	32.1	23.4	11.2	21,259	30,590	7,752	18,044
1975	56.2	31,620	5.5	9.7	2.4	32.5	25.9	12.3	20,405	29,811	7,802	17,791
1976	56.7	32,597	5.3	9.4	2.5	33.0	25.0	11.8	20,542	30,202	7,793	18,114
1977	57.2	32,758	5.3	9.3	2.6	31.7	24.7	11.6	20,714	30,836	8.064	18,035
1978	57.8	33,548	5.3	9.1	2.7	31.4	24.5	11.4	20,797	30,547	7,737	18,336
1979 [4]	59.6	33,454	5.5	9.2	2.6	30.4	26.1	11.7	20,118	29,854	7,433	17,987
1980	60.3	31,637	6.2	10.3	3.0	32.7	29.3	13.0	18,856	28,853	7,404	17,443
1981	61.0	30,540	6.9	11.2	3.3	34.6	31.8	14.0	18,379	28,227	7,445	16,993
1982	61.4	30,111	7.5	12.2	3.4	36.3	34.4	15.0	17,925	27,826	7,565	17,557
1983 [3]	62.0	30,719	7.6	12.3	3.6	36.0	35.3	15.2	18,253	28,020	7,974	18,037
1984	62.7	31,547	7.3	11.6	3.5	34.5	33.7	14.4	18,618	28,648	8,197	18,405
1985	63.6	31,962	7.2	11.4	3.5	34.0	33.1	14.0	18,797	28,809	8,317	18,729
1986	64.5	33,328	7.0	10.9	3.6	34.6	32.4	13.6	19,363	29,296	8,610	19,056
1987 [3]	65.2	33,805	7.0	10.7	3.7	34.2	32.2	13.4	19,414	29,124	9,054	19,172
1988	65.8	33,742	6.9	10.4	3.6	33.4	31.7	13.0	19,819	28,659	9,312	19,439
1989	66.1	34,213	6.8	10.3	3.5	32.2	31.5	12.8	19,893	28,605	9,624	19,643
WHITE												
1970	46.5	32,713	3.7	8.0	1.1	25.0	17.5	9.9	22,406	30,191	7,242	17,692
1971	47.6	32,675	3.8	7.9	1.2	26.5	17.8	9.9	22,158	30,317	7,495	17,657
1972	48.5	34,260	3.4	7.1	1.1	24.3	16.2	9.0	23,180	32,388	7,760	18,309
1973	48.9	35,175	3.2	6.6	1.2	24.5	15.1	8.4	23,607	32,955	7,884	18,427
1974 [3]	49.4	33,724	3.4	6.8	1.3	24.8	15.7	8.6	22,270	31,186	7,840	18,198
1975	49.9	32,885	3.8	7.7	1.4	25.9	17.8	9.7	21,435	30,500	7,883	17,832
1976	50.1	33,859	3.6	7.1	1.4	25.2	16.7	9.1	21,655	31,102	7,858	18,253
1977	50.5	34,253	3.5	7.0	1.4	24.0	16.4	8.9	21,696	31,467	8,187	18,150
1978	50.9	34,933	3.5	6.9	1.3	23.5	16.3	8.7	21,782	31,114	7,830	18,509
1979 [4]	52.2	34,910	3.6	6.9	1.4	22.3	17.2	9.0	21,017	30,716	7,503	18,144
1980	52.7	32,962	4.2	8.0	1.6	25.7	19.7	10.2	20,057	29,676	7,445	17,611
1981	53.3	32,080	4.7	8.8	1.8	27.4	21.6	11.1	19,502	28,890	7,529	17,277
1982	53.4	31,614	5.1	9.6	1.8	27.9	23.5	12.0	18,951	28,568	7,667	17,793
1983 [3]	53.9	32,167	5.2	9.7	1.9	28.3	24.0	12.1	19,203	28,768	8,114	18,279
1984	54.4	33,042	4.9	9.1	1.9	27.1	23.0	11.5	19,653	29,629	8,293	18,588
1985	55.0	33,595	5.0	9.1	2.0	27.4	22.9	11.4	19,179	29,609	8,478	18,994
1986	55.7	34,857	4.8	8.6	2.0	28.2	22.2	11.0	20,433	30,114	8,780	19,348
1987 [3]	56.1	35,350	4.6	8.1	2.0	26.9	21.2	10.4	20,636	29,803	9,286	19,527
1988	56.5	35,549	4.5	7.9	1.9	26.5	20.7	10.1	20,921	29,624	9,542	19,730
1989	56.5	35,975	4.4	7.8	1.9	25.4	20.8	10.0	20,863	29,846	9,812	19,873
BLACK												
1970	4.9	20,067	1.5	29.5	.8	54.3	7.5	33.5	13,285	20,565	6,593	14,496
1971	5.2	19,718	1.5	28.8	.9	53.5	7.4	32.5	13,214	20,731	6,567	15,590
1972	5.3	20,362	1.5	29.0	1.0	53.3	7.7	33.3	14,040	21,872	7,250	15,663
1973	5.4	20,301	1.5	28.1	1.0	52.7	7.4	31.4	14,280	22,211	7,116	15,626
1974 [3]	5.5	20,137	1.5	26.9	1.0	52.2	7.2	30.3	13,798	22,343	7,078	16,794
1975	5.6	20,234	1.5	27.1	1.0	50.1	7.5	31.3	12,815	22,698	7,161	17,037
1976	5.8	20,141	1.6	27.9	1.1	52.2	7.6	31.1	13,039	22,276	7,405	17,066
1977	5.8	19,568	1.6	28.2	1.2	51.0	7.7	31.3	12,875	21,694	7,070	16,963
1978	5.9	20,690	1.6	27.5	1.2	50.6	7.6	30.6	13,049	23,830	7,050	17,155
1979 [4]	6.2	19,768	1.7	27.8	1.2	49.4	8.1	31.0	13,010	22,137	6,829	16,626
1980	6.3	19,073	1.8	28.9	1.3	49.4	8.6	32.5	12,052	20,880	6,892	16,425
1981	6.4	18,097	2.0	30.8	1.4	52.9	9.2	34.2	11,597	20,440	6,688	15,603
1982	6.5	17,473	2.2	33.0	1.5	56.2	9.7	35.6	11,357	20,290	6,763	15,903
1983	6.7	18,128	2.2	32.3	1.5	53.7	9.9	35.7	11,230	20,430	6,933	16,185
1984	6.8	18,416	2.1	30.9	1.5	51.7	9.5	33.8	11,276	20,221	7,356	16,751
1985	6.9	19,344	2.0	28.7	1.5	50.5	8.9	31.3	12,409	20,710	7,234	16,814
1986	7.1	19,917	2.0	28.0	1.5	50.1	9.0	31.1	12,244	21,232	7,429	16,930
1987 [3]	7.2	20,091	2.1	29.4	1.6	51.1	9.5	32.4	12,242	21,309	7,585	17,441
1988	7.4	20,260	2.1	28.2	1.6	49.0	9.4	31.3	12,624	21,714	7,703	17,680
1989	7.5	20,209	2.1	27.8	1.5	46.5	9.3	30.7	12,609	20,706	7,875	17,908

[1] The term "family" refers to a group of two or more persons related by blood, marriage, or adoption and residing together; all such persons are considered members of the same family. Beginning 1979, based on householder concept and restricted to primary families.

[2] Prior to 1979, data are for persons 14 years and over.

[3] Based on revised methodology; comparable with succeeding years.

[4] Based on 1980 census population controls; comparable with succeeding years.

Note.—The poverty level is based on the poverty index adopted by a Federal interagency committee in 1969. That index reflected different consumption requirements for families based on size and composition, sex and age of family householder, and farm-nonfarm residence. Minor revisions implemented in 1981 eliminated variations in the poverty thresholds based on two of these variables, farm-nonfarm residence and sex of householder. The poverty thresholds are updated every year to reflect changes in the consumer price index. For further details, see "Current Population Reports," Series P-60, No. 168.

Source: Department of Commerce, Bureau of the Census.

Table B–31.—*Population by age groups, 1929–90*

[Thousands of persons]

July 1	Total	Age (years)						
		Under 5	5–15	16–19	20–24	25–44	45–64	65 and over
1929	121,767	11,734	26,800	9,127	10,694	35,862	21,076	6,474
1933	125,579	10,612	26,897	9,302	11,152	37,319	22,933	7,363
1939	130,880	10,418	25,179	9,822	11,519	39,354	25,823	8,764
1940	132,122	10,579	24,811	9,895	11,690	39,868	26,249	9,031
1941	133,402	10,850	24,516	9,840	11,807	40,383	26,718	9,288
1942	134,860	11,301	24,231	9,730	11,955	40,861	27,196	9,584
1943	136,739	12,016	24,093	9,607	12,064	41,420	27,671	9,867
1944	138,397	12,524	23,949	9,561	12,062	42,016	28,138	10,147
1945	139,928	12,979	23,907	9,361	12,036	42,521	28,630	10,494
1946	141,389	13,244	24,103	9,119	12,004	43,027	29,064	10,828
1947	144,126	14,406	24,468	9,097	11,814	43,657	29,498	11,185
1948	146,631	14,919	25,209	8,952	11,794	44,288	29,931	11,538
1949	149,188	15,607	25,852	8,788	11,700	44,916	30,405	11,921
1950	152,271	16,410	26,721	8,542	11,680	45,672	30,849	12,397
1951	154,878	17,333	27,279	8,446	11,552	46,103	31,362	12,803
1952	157,553	17,312	28,894	8,414	11,350	46,495	31,884	13,203
1953	160,184	17,638	30,227	8,460	11,062	46,786	32,394	13,617
1954	163,026	18,057	31,480	8,637	10,832	47,001	32,942	14,076
1955	165,931	18,566	32,682	8,744	10,714	47,194	33,506	14,525
1956	168,903	19,003	33,994	8,916	10,616	47,379	34,057	14,938
1957	171,984	19,494	35,272	9,195	10,603	47,440	34,591	15,388
1958	174,882	19,887	36,445	9,543	10,756	47,337	35,109	15,806
1959	177,830	20,175	37,368	10,215	10,969	47,192	35,663	16,248
1960	180,671	20,341	38,494	10,683	11,134	47,140	36,203	16,675
1961	183,691	20,522	39,765	11,025	11,483	47,084	36,722	17,089
1962	186,538	20,469	41,205	11,180	11,959	47,013	37,255	17,457
1963	189,242	20,342	41,626	12,007	12,714	46,994	37,782	17,778
1964	191,889	20,165	42,297	12,736	13,269	46,958	38,338	18,127
1965	194,303	19,824	42,938	13,516	13,746	46,912	38,916	18,451
1966	196,560	19,208	43,702	14,311	14,050	47,001	39,534	18,755
1967	198,712	18,563	44,244	14,200	15,248	47,194	40,193	19,071
1968	200,706	17,913	44,622	14,452	15,786	47,721	40,846	19,365
1969	202,677	17,376	44,840	14,800	16,480	48,064	41,437	19,680
1970	205,052	17,166	44,816	15,289	17,202	48,473	41,999	20,107
1971	207,661	17,244	44,591	15,688	18,159	48,936	42,482	20,561
1972	209,896	17,101	44,203	16,039	18,153	50,482	42,898	21,020
1973	211,909	16,851	43,582	16,446	18,521	51,749	43,235	21,525
1974	213,854	16,487	42,989	16,769	18,975	53,051	43,522	22,061
1975	215,973	16,121	42,508	17,017	19,527	54,302	43,801	22,696
1976	218,035	15,617	42,099	17,194	19,986	55,852	44,008	23,278
1977	220,239	15,564	41,298	17,276	20,499	57,561	44,150	23,892
1978	222,585	15,735	40,428	17,288	20,946	59,400	44,286	24,502
1979	225,055	16,063	39,552	17,242	21,297	61,379	44,390	25,134
1980	227,757	16,458	38,844	17,160	21,584	63,494	44,515	25,704
1981	230,138	16,931	38,190	16,771	21,821	65,619	44,569	26,235
1982	232,520	17,298	37,877	16,255	21,807	67,856	44,602	26,825
1983	234,799	17,651	37,668	15,704	21,700	69,971	44,680	27,426
1984	237,001	17,830	37,657	15,141	21,536	72,049	44,818	27,971
1985	239,279	18,004	37,691	14,819	21,214	74,077	44,934	28,540
1986	241,625	18,154	37,706	14,802	20,608	76,124	45,058	29,174
1987	243,942	18,267	37,687	14,958	19,982	77,897	45,310	29,841
1988	246,307	18,432	38,007	14,894	19,371	79,224	46,004	30,374
1989	248,762	18,752	38,440	14,569	18,886	80,633	46,498	30,984
1990	251,394	....	....	....	....	....	....	....

Note.—Includes Armed Forces overseas beginning 1940. Includes Alaska and Hawaii beginning 1950.

Population estimates in this series do not reflect the results of the 1990 census; according to the census, the total population on April 1, 1990 was 249,632,692.

Source: Department of Commerce, Bureau of the Census.

TABLE B–32.—*Population and the labor force, 1929–90*

[Monthly data seasonally adjusted, except as noted]

Year or month	Civilian noninstitutional population [1]	Resident Armed Forces [1]	Labor force including resident Armed Forces	Employment including resident Armed Forces	Civilian labor force					Unemployment rate		Civilian labor force participation rate [4]	Civilian employment/population ratio [5]
					Total	Employment			Unemployment	All workers [2]	Civilian workers [3]		
						Total	Agricultural	Nonagricultural					
	Thousands of persons 14 years of age and over									Percent			
1929	....	....	....	....	49,180	47,630	10,450	37,180	1,550	....	3.2	....	....
1933	....	....	....	....	51,590	38,760	10,090	28,670	12,830	....	24.9	....	....
1939	....	....	....	....	55,230	45,750	9,610	36,140	9,480	....	17.2	....	....
1940	99,840	....	....	....	55,640	47,520	9,540	37,980	8,120	....	14.6	55.7	47.6
1941	99,900	....	....	....	55,910	50,350	9,100	41,250	5,560	....	9.9	56.0	50.4
1942	98,640	....	....	....	56,410	53,750	9,250	44,500	2,660	....	4.7	57.2	54.5
1943	94,640	....	....	....	55,540	54,470	9,080	45,390	1,070	....	1.9	58.7	57.6
1944	93,220	....	....	....	54,630	53,960	8,950	45,010	670	....	1.2	58.6	57.9
1945	94,090	....	....	....	53,860	52,820	8,580	44,240	1,040	....	1.9	57.2	56.1
1946	103,070	....	....	....	57,520	55,250	8,320	46,930	2,270	....	3.9	55.8	53.6
1947	106,018	....	....	....	60,168	57,812	8,256	49,557	2,356	....	3.9	56.8	54.5
	Thousands of persons 16 years of age and over												
1947	101,827	....	....	....	59,350	57,038	7,890	49,148	2,311	....	3.9	58.3	56.0
1948	103,068	....	....	....	60,621	58,343	7,629	50,714	2,276	....	3.8	58.8	56.6
1949	103,994	....	....	....	61,286	57,651	7,658	49,993	3,637	....	5.9	58.9	55.4
1950	104,995	1,169	63,377	60,087	62,208	58,918	7,160	51,758	3,288	5.2	5.3	59.2	56.1
1951	104,621	2,143	64,160	62,104	62,017	59,961	6,726	53,235	2,055	3.2	3.3	59.2	57.3
1952	105,231	2,386	64,524	62,636	62,138	60,250	6,500	53,749	1,883	2.9	3.0	59.0	57.3
1953 [6]	107,056	2,231	65,246	63,410	63,015	61,179	6,260	54,919	1,834	2.8	2.9	58.9	57.1
1954	108,321	2,142	65,785	62,251	63,643	60,109	6,205	53,904	3,532	5.4	5.5	58.8	55.5
1955	109,683	2,064	67,087	64,234	65,023	62,170	6,450	55,722	2,852	4.3	4.4	59.3	56.7
1956	110,954	1,965	68,517	65,764	66,552	63,799	6,283	57,514	2,750	4.0	4.1	60.0	57.5
1957	112,265	1,948	68,877	66,019	66,929	64,071	5,947	58,123	2,859	4.2	4.3	59.6	57.1
1958	113,727	1,847	69,486	64,883	67,639	63,036	5,586	57,450	4,602	6.6	6.8	59.5	55.4
1959	115,329	1,788	70,157	66,418	68,369	64,630	5,565	59,065	3,740	5.3	5.5	59.3	56.0
1960 [6]	117,245	1,861	71,489	67,639	69,628	65,778	5,458	60,318	3,852	5.4	5.5	59.4	56.1
1961	118,771	1,900	72,359	67,646	70,459	65,746	5,200	60,546	4,714	6.5	6.7	59.3	55.4
1962 [6]	120,153	2,061	72,675	68,763	70,614	66,702	4,944	61,759	3,911	5.4	5.5	58.8	55.5
1963	122,416	2,006	73,839	69,768	71,833	67,762	4,687	63,076	4,070	5.5	5.7	58.7	55.4
1964	124,485	2,018	75,109	71,323	73,091	69,305	4,523	64,782	3,786	5.0	5.2	58.7	55.7
1965	126,513	1,946	76,401	73,034	74,455	71,088	4,361	66,726	3,366	4.4	4.5	58.9	56.2
1966	128,058	2,122	77,892	75,017	75,770	72,895	3,979	68,915	2,875	3.7	3.8	59.2	56.9
1967	129,874	2,218	79,565	76,590	77,347	74,372	3,844	70,527	2,975	3.7	3.8	59.6	57.3
1968	132,028	2,253	80,990	78,173	78,737	75,920	3,817	72,103	2,817	3.5	3.6	59.6	57.5
1969	134,335	2,238	82,972	80,140	80,734	77,902	3,606	74,296	2,832	3.4	3.5	60.1	58.0
1970	137,085	2,118	84,889	80,796	82,771	78,678	3,463	75,215	4,093	4.8	4.9	60.4	57.4
1971	140,216	1,973	86,355	81,340	84,382	79,367	3,394	75,972	5,016	5.8	5.9	60.2	56.6
1972 [6]	144,126	1,813	88,847	83,966	87,034	82,153	3,484	78,669	4,882	5.5	5.6	60.4	57.0
1973 [6]	147,096	1,774	91,203	86,838	89,429	85,064	3,470	81,594	4,365	4.8	4.9	60.8	57.8
1974	150,120	1,721	93,670	88,515	91,949	86,794	3,515	83,279	5,156	5.5	5.6	61.3	57.8
1975	153,153	1,678	95,453	87,524	93,775	85,846	3,408	82,438	7,929	8.3	8.5	61.2	56.1
1976	156,150	1,668	97,826	90,420	96,158	88,752	3,331	85,421	7,406	7.6	7.7	61.6	56.8
1977	159,033	1,656	100,665	93,673	99,009	92,017	3,283	88,734	6,991	6.9	7.1	62.3	57.9
1978 [6]	161,910	1,631	103,882	97,679	102,251	96,048	3,387	92,661	6,202	6.0	6.1	63.2	59.3
1979	164,863	1,597	106,559	100,421	104,962	98,824	3,347	95,477	6,137	5.8	5.8	63.7	59.9
1980	167,745	1,604	108,544	100,907	106,940	99,303	3,364	95,938	7,637	7.0	7.1	63.8	59.2
1981	170,130	1,645	110,315	102,042	108,670	100,397	3,368	97,030	8,273	7.5	7.6	63.9	59.0
1982	172,271	1,668	111,872	101,194	110,204	99,526	3,401	96,125	10,678	9.5	9.7	64.0	57.8
1983	174,215	1,676	113,226	102,510	111,550	100,834	3,383	97,450	10,717	9.5	9.6	64.0	57.9
1984	176,383	1,697	115,241	106,702	113,544	105,005	3,321	101,685	8,539	7.4	7.5	64.4	59.5
1985	178,206	1,706	117,167	108,856	115,461	107,150	3,179	103,971	8,312	7.1	7.2	64.8	60.1
1986 [6]	180,587	1,706	119,540	111,303	117,834	109,597	3,163	106,434	8,237	6.9	7.0	65.3	60.7
1987	182,753	1,737	121,602	114,177	119,865	112,440	3,208	109,232	7,425	6.1	6.2	65.6	61.5
1988	184,613	1,709	123,378	116,677	121,669	114,968	3,169	111,800	6,701	5.4	5.5	65.9	62.3
1989	186,393	1,688	125,557	119,030	123,869	117,342	3,199	114,142	6,528	5.2	5.3	66.5	63.0
1990	188,049	1,637	126,424	119,550	124,787	117,914	3,186	114,728	6,874	5.4	5.5	66.4	62.7
1986: Jan	179,670	1,691	118,373	110,578	116,682	108,887	3,287	105,600	7,795	6.6	6.7	64.9	60.6
Feb	179,821	1,691	118,573	110,171	116,882	108,480	3,083	105,397	8,402	7.1	7.2	65.0	60.3
Mar	179,985	1,693	118,913	110,530	117,220	108,837	3,200	105,637	8,383	7.0	7.2	65.1	60.5
Apr	180,148	1,695	119,011	110,647	117,316	108,952	3,153	105,799	8,364	7.0	7.1	65.1	60.5
May	180,311	1,687	119,215	110,776	117,528	109,089	3,150	105,939	8,439	7.1	7.2	65.2	60.5
June	180,503	1,680	119,764	111,256	118,084	109,576	3,193	106,383	8,508	7.1	7.2	65.4	60.7
July	180,682	1,672	119,801	111,482	118,129	109,810	3,141	106,669	8,319	6.9	7.0	65.4	60.8
Aug	180,828	1,697	119,847	111,712	118,150	110,015	3,082	106,933	8,135	6.8	6.9	65.3	60.8
Sept	180,997	1,716	120,111	111,801	118,395	110,085	3,171	106,914	8,310	6.9	7.0	65.4	60.8
Oct	181,186	1,749	120,265	112,022	118,516	110,273	3,128	107,145	8,243	6.9	7.0	65.4	60.9
Nov	181,363	1,751	120,385	112,226	118,634	110,475	3,220	107,255	8,159	6.8	6.9	65.4	60.9
Dec	181,547	1,750	120,361	112,478	118,611	110,728	3,148	107,580	7,883	6.5	6.6	65.3	61.0

See next page for continuation of table.

TABLE B–32.—*Population and the labor force, 1929–90—Continued*

[Monthly data seasonally adjusted, except as noted]

Year or month	Civilian noninstitutional population[1]	Resident Armed Forces[1]	Labor force including resident Armed Forces	Employment including resident Armed Forces	Civilian labor force					Unemployment rate		Civilian labor force participation rate[4]	Civilian employment/population ratio[5]
					Total	Employment			Unemployment	All workers[2]	Civilian workers[3]		
						Total	Agricultural	Nonagricultural					
	Thousands of persons 16 years of age and over									Percent			
1987: Jan	181,827	1,748	120,588	112,716	118,840	110,968	3,143	107,825	7,872	6.5	6.6	65.4	61.0
Feb	181,998	1,740	120,854	112,996	119,114	111,256	3,204	108,052	7,858	6.5	6.6	65.4	61.1
Mar	182,179	1,736	121,021	113,146	119,285	111,410	3,212	108,198	7,875	6.5	6.6	65.5	61.2
Apr	182,344	1,735	121,069	113,525	119,334	111,790	3,242	108,543	7,544	6.2	6.3	65.4	61.3
May	182,533	1,726	121,720	114,140	119,994	112,414	3,346	109,068	7,580	6.2	6.3	65.7	61.6
June	182,703	1,718	121,335	113,927	119,617	112,209	3,216	108,993	7,408	6.1	6.2	65.5	61.4
July	182,885	1,720	121,618	114,316	119,898	112,596	3,236	109,360	7,302	6.0	6.1	65.6	61.6
Aug	183,002	1,736	122,041	114,768	120,305	113,032	3,116	109,916	7,273	6.0	6.0	65.7	61.8
Sept	183,161	1,743	121,758	114,662	120,015	112,919	3,189	109,730	7,096	5.8	5.9	65.5	61.7
Oct	183,311	1,741	122,259	115,052	120,518	113,311	3,221	110,090	7,207	5.9	6.0	65.7	61.8
Nov	183,470	1,755	122,304	115,295	120,549	113,540	3,150	110,390	7,009	5.7	5.8	65.7	61.9
Dec	183,620	1,750	122,514	115,607	120,764	113,857	3,206	110,651	6,907	5.6	5.7	65.8	62.0
1988: Jan	183,822	1,749	122,724	115,796	120,975	114,047	3,245	110,802	6,928	5.6	5.7	65.8	62.0
Feb	183,969	1,736	122,894	115,984	121,158	114,248	3,203	111,045	6,910	5.6	5.7	65.9	62.1
Mar	184,111	1,736	122,677	115,774	120,941	114,038	3,166	110,872	6,903	5.6	5.7	65.7	61.9
Apr	184,232	1,732	122,985	116,385	121,253	114,653	3,218	111,435	6,600	5.4	5.4	65.8	62.2
May	184,374	1,714	122,783	115,971	121,069	114,257	3,121	111,136	6,812	5.5	5.6	65.7	62.0
June	184,562	1,685	123,189	116,597	121,504	114,912	3,114	111,798	6,592	5.4	5.4	65.8	62.3
July	184,729	1,673	123,348	116,685	121,675	115,012	3,061	111,951	6,663	5.4	5.5	65.9	62.3
Aug	184,830	1,692	123,769	116,923	122,077	115,231	3,125	112,106	6,846	5.5	5.6	66.0	62.3
Sept	184,962	1,704	123,695	117,098	121,991	115,394	3,168	112,226	6,597	5.3	5.4	66.0	62.4
Oct	185,114	1,687	123,889	117,358	122,202	115,671	3,226	112,445	6,531	5.3	5.3	66.0	62.5
Nov	185,244	1,705	124,250	117,768	122,545	116,063	3,252	112,811	6,482	5.2	5.3	66.2	62.7
Dec	185,402	1,696	124,342	117,877	122,646	116,181	3,186	112,995	6,465	5.2	5.3	66.2	62.7
1989: Jan	185,644	1,696	125,047	118,404	123,351	116,708	3,286	113,422	6,643	5.3	5.4	66.4	62.9
Feb	185,777	1,684	124,831	118,484	123,147	116,800	3,232	113,568	6,347	5.1	5.2	66.3	62.9
Mar	185,897	1,684	124,938	118,686	123,254	117,002	3,186	113,816	6,252	5.0	5.1	66.3	62.9
Apr	186,024	1,684	125,238	118,773	123,554	117,089	3,146	113,943	6,465	5.2	5.2	66.4	62.9
May	186,181	1,673	125,157	118,738	123,484	117,065	3,124	113,941	6,419	5.1	5.2	66.3	62.9
June	186,329	1,666	125,728	119,066	124,062	117,400	3,083	114,317	6,662	5.3	5.4	66.6	63.0
July	186,483	1,666	125,659	119,079	123,993	117,413	3,225	114,188	6,580	5.2	5.3	66.5	63.0
Aug	186,598	1,688	125,757	119,253	124,069	117,565	3,285	114,280	6,504	5.2	5.2	66.5	63.0
Sept	186,726	1,702	125,698	119,119	123,996	117,417	3,231	114,186	6,579	5.2	5.3	66.4	62.9
Oct	186,871	1,709	125,915	119,328	124,206	117,619	3,204	114,415	6,587	5.2	5.3	66.5	62.9
Nov	187,017	1,704	126,252	119,624	124,548	117,920	3,158	114,762	6,628	5.2	5.3	66.6	63.1
Dec	187,165	1,700	126,242	119,657	124,542	117,957	3,183	114,774	6,585	5.2	5.3	66.5	63.0
1990: Jan	187,293	1,697	126,186	119,642	124,489	117,945	3,145	114,800	6,544	5.2	5.3	66.5	63.0
Feb	187,412	1,678	126,331	119,752	124,653	118,074	3,119	114,955	6,579	5.2	5.3	66.5	63.0
Mar	187,529	1,669	126,467	119,904	124,798	118,235	3,197	115,038	6,563	5.2	5.3	66.5	63.0
Apr	187,669	1,657	126,438	119,747	124,781	118,090	3,140	114,950	6,691	5.3	5.4	66.5	62.9
May	187,828	1,639	126,578	119,916	124,939	118,277	3,286	114,991	6,662	5.3	5.3	66.5	63.0
June	187,977	1,630	126,427	119,867	124,797	118,237	3,279	114,958	6,560	5.2	5.3	66.4	62.9
July	188,136	1,627	126,336	119,509	124,709	117,882	3,108	114,774	6,827	5.4	5.5	66.3	62.7
Aug	188,261	1,640	126,345	119,330	124,705	117,690	3,152	114,538	7,015	5.6	5.6	66.2	62.5
Sept	188,401	1,601	126,571	119,484	124,970	117,883	3,194	114,689	7,087	5.6	5.7	66.3	62.6
Oct	188,525	1,570	126,445	119,303	124,875	117,733	3,175	114,558	7,142	5.6	5.7	66.2	62.4
Nov	188,697	1,615	126,338	119,001	124,723	117,386	3,185	114,201	7,337	5.8	5.9	66.1	62.2
Dec	188,866	1,617	126,791	119,191	125,174	117,574	3,253	114,321	7,600	6.0	6.1	66.3	62.3

[1] Not seasonally adjusted.

[2] Unemployed as percent of labor force including resident Armed Forces.

[3] Unemployed as percent of civilian labor force.

[4] Civilian labor force as percent of civilian noninstitutional population.

[5] Civilian employment as percent of civilian noninstitutional population.

[6] Not strictly comparable with earlier data due to population adjustments as follows: Beginning 1953, introduction of 1950 census data added about 600,000 to population and 350,000 to labor force, total employment, and agricultural employment. Beginning 1960, inclusion of Alaska and Hawaii added about 500,000 to population, 300,000 to labor force, and 240,000 to nonagricultural employment. Beginning 1962, introduction of 1960 census data reduced population by about 50,000 and labor force and employment by 200,000. Beginning 1972, introduction of 1970 census data added about 800,000 to civilian noninstitutional population and 333,000 to labor force and employment. A subsequent adjustment based on 1970 census in March 1973 added 60,000 to labor force and to employment. Beginning 1978, changes in sampling and estimation procedures introduced into the household survey added about 250,000 to labor force and to employment. Unemployment levels and rates were not significantly affected. Beginning 1986, the introduction of revised population controls added about 400,000 to the civilian population and labor force and 350,000 to civilian employment. Unemployment levels and rates were not significantly affected.

Note.—Labor force data in Tables B–32 through B–41 are based on household interviews and relate to the calendar week including the 12th of the month. For definitions of terms, area samples used, historical comparability of the data, comparability with other series, etc., see "Employment and Earnings."

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–33.—*Civilian employment and unemployment by sex and age, 1947–90*

[Thousands of persons 16 years of age and over; monthly data seasonally adjusted]

Year or month	Civilian employment							Unemployment						
	Total	Males			Females			Total	Males			Females		
		Total	16–19 years	20 years and over	Total	16–19 years	20 years and over		Total	16–19 years	20 years and over	Total	16–19 years	20 years and over
1947	57,038	40,995	2,218	38,776	16,045	1,691	14,354	2,311	1,692	270	1,422	619	144	475
1948	58,343	41,725	2,344	39,382	16,617	1,682	14,936	2,276	1,559	256	1,305	717	153	564
1949	57,651	40,925	2,124	38,803	16,723	1,588	15,137	3,637	2,572	353	2,219	1,065	223	841
1950	58,918	41,578	2,186	39,394	17,340	1,517	15,824	3,288	2,239	318	1,922	1,049	195	854
1951	59,961	41,780	2,156	39,626	18,181	1,611	16,570	2,055	1,221	191	1,029	834	145	689
1952	60,250	41,682	2,107	39,578	18,568	1,612	16,958	1,883	1,185	205	980	698	140	559
1953[1]	61,179	42,430	2,136	40,296	18,749	1,584	17,164	1,834	1,202	184	1,019	632	123	510
1954	60,109	41,619	1,985	39,634	18,490	1,490	17,000	3,532	2,344	310	2,035	1,188	191	997
1955	62,170	42,621	2,095	40,526	19,551	1,547	18,002	2,852	1,854	274	1,580	998	176	823
1956	63,799	43,379	2,164	41,216	20,419	1,654	18,767	2,750	1,711	269	1,442	1,039	209	832
1957	64,071	43,357	2,115	41,239	20,714	1,663	19,052	2,859	1,841	300	1,541	1,018	197	821
1958	63,036	42,423	2,012	40,411	20,613	1,570	19,043	4,602	3,098	416	2,681	1,504	262	1,242
1959	64,630	43,466	2,198	41,267	21,164	1,640	19,524	3,740	2,420	398	2,022	1,320	256	1,063
1960[1]	65,778	43,904	2,361	41,543	21,874	1,768	20,105	3,852	2,486	426	2,060	1,366	286	1,080
1961	65,746	43,656	2,315	41,342	22,090	1,793	20,296	4,714	2,997	479	2,518	1,717	349	1,368
1962[1]	66,702	44,177	2,362	41,815	22,525	1,833	20,693	3,911	2,423	408	2,016	1,488	313	1,175
1963	67,762	44,657	2,406	42,251	23,105	1,849	21,257	4,070	2,472	501	1,971	1,598	383	1,216
1964	69,305	45,474	2,587	42,886	23,831	1,929	21,903	3,786	2,205	487	1,718	1,581	385	1,195
1965	71,088	46,340	2,918	43,422	24,748	2,118	22,630	3,366	1,914	479	1,435	1,452	395	1,056
1966	72,895	46,919	3,253	43,668	25,976	2,468	23,510	2,875	1,551	432	1,120	1,324	405	921
1967	74,372	47,479	3,186	44,294	26,893	2,496	24,397	2,975	1,508	448	1,060	1,468	391	1,078
1968	75,920	48,114	3,255	44,859	27,807	2,526	25,281	2,817	1,419	426	993	1,397	412	985
1969	77,902	48,818	3,430	45,388	29,084	2,687	26,397	2,832	1,403	440	963	1,429	413	1,015
1970	78,678	48,990	3,409	45,581	29,688	2,735	26,952	4,093	2,238	599	1,638	1,855	506	1,349
1971	79,367	49,390	3,478	45,912	29,976	2,730	27,246	5,016	2,789	693	2,097	2,227	568	1,658
1972[1]	82,153	50,896	3,765	47,130	31,257	2,980	28,276	4,882	2,659	711	1,948	2,222	598	1,625
1973[1]	85,064	52,349	4,039	48,310	32,715	3,231	29,484	4,365	2,275	653	1,624	2,089	583	1,507
1974	86,794	53,024	4,103	48,922	33,769	3,345	30,424	5,156	2,714	757	1,957	2,441	665	1,777
1975	85,846	51,857	3,839	48,018	33,989	3,263	30,726	7,929	4,442	966	3,476	3,486	802	2,684
1976	88,752	53,138	3,947	49,190	35,615	3,389	32,226	7,406	4,036	939	3,098	3,369	780	2,588
1977	92,017	54,728	4,174	50,555	37,289	3,514	33,775	6,991	3,667	874	2,794	3,324	789	2,535
1978[1]	96,048	56,479	4,336	52,143	39,569	3,734	35,836	6,202	3,142	813	2,328	3,061	769	2,292
1979	98,824	57,607	4,300	53,308	41,217	3,783	37,434	6,137	3,120	811	2,308	3,018	743	2,276
1980	99,303	57,186	4,085	53,101	42,117	3,625	38,492	7,637	4,267	913	3,353	3,370	755	2,615
1981	100,397	57,397	3,815	53,582	43,000	3,411	39,590	8,273	4,577	962	3,615	3,696	800	2,895
1982	99,526	56,271	3,379	52,891	43,256	3,170	40,086	10,678	6,179	1,090	5,089	4,499	886	3,613
1983	100,834	56,787	3,300	53,487	44,047	3,043	41,004	10,717	6,260	1,003	5,257	4,457	825	3,632
1984	105,005	59,091	3,322	55,769	45,915	3,122	42,793	8,539	4,744	812	3,932	3,794	687	3,107
1985	107,150	59,891	3,328	56,562	47,259	3,105	44,154	8,312	4,521	806	3,715	3,791	661	3,129
1986[1]	109,597	60,892	3,323	57,569	48,706	3,149	45,556	8,237	4,530	779	3,751	3,707	675	3,032
1987	112,440	62,107	3,381	58,726	50,334	3,260	47,074	7,425	4,101	732	3,369	3,324	616	2,709
1988	114,968	63,273	3,492	59,781	51,696	3,313	48,383	6,701	3,655	667	2,987	3,046	558	2,487
1989	117,342	64,315	3,477	60,837	53,027	3,282	49,745	6,528	3,525	658	2,867	3,003	536	2,467
1990	117,914	64,435	3,237	61,198	53,479	3,024	50,455	6,874	3,799	629	3,170	3,075	519	2,555
1989: Jan	116,708	63,798	3,355	60,443	52,910	3,364	49,546	6,643	3,647	762	2,885	2,996	544	2,452
Feb	116,800	63,998	3,432	60,566	52,802	3,300	49,502	6,347	3,535	686	2,849	2,812	492	2,320
Mar	117,002	64,235	3,481	60,754	52,767	3,274	49,493	6,252	3,330	615	2,715	2,922	501	2,421
Apr	117,089	64,213	3,475	60,738	52,876	3,308	49,568	6,465	3,507	647	2,860	2,958	515	2,443
May	117,065	64,192	3,421	60,771	52,873	3,301	49,572	6,419	3,413	667	2,746	3,006	514	2,492
June	117,400	64,549	3,518	61,031	52,851	3,261	49,590	6,662	3,496	678	2,818	3,166	602	2,564
July	117,413	64,483	3,553	60,930	52,930	3,189	49,741	6,580	3,409	580	2,829	3,171	582	2,589
Aug	117,565	64,456	3,566	60,890	53,109	3,291	49,818	6,504	3,485	625	2,860	3,019	545	2,474
Sept	117,417	64,136	3,426	60,710	53,281	3,269	50,012	6,579	3,659	635	3,024	2,920	554	2,366
Oct	117,619	64,506	3,492	61,014	53,113	3,277	49,836	6,587	3,574	660	2,914	3,013	518	2,495
Nov	117,920	64,479	3,444	61,035	53,441	3,319	50,122	6,628	3,614	681	2,933	3,014	528	2,486
Dec	117,957	64,605	3,456	61,149	53,352	3,220	50,132	6,585	3,555	651	2,904	3,030	533	2,497
1990: Jan	117,945	64,490	3,431	61,059	53,455	3,190	50,265	6,544	3,595	623	2,972	2,949	511	2,438
Feb	118,074	64,580	3,420	61,160	53,494	3,154	50,340	6,579	3,562	611	2,951	3,017	535	2,482
Mar	118,235	64,607	3,405	61,202	53,628	3,260	50,368	6,563	3,563	611	2,952	3,000	531	2,469
Apr	118,090	64,536	3,384	61,152	53,554	3,130	50,424	6,691	3,662	626	3,036	3,029	510	2,519
May	118,277	64,589	3,313	61,276	53,688	3,075	50,613	6,662	3,668	631	3,037	2,994	532	2,462
June	118,237	64,499	3,205	61,294	53,738	3,063	50,675	6,560	3,645	597	3,048	2,915	483	2,432
July	117,882	64,266	3,104	61,162	53,616	2,979	50,637	6,827	3,795	626	3,169	3,032	514	2,518
Aug	117,690	64,188	3,014	61,174	53,502	2,853	50,649	7,015	3,889	644	3,245	3,126	520	2,606
Sept	117,883	64,412	3,164	61,248	53,471	2,967	50,504	7,087	3,961	637	3,324	3,126	501	2,625
Oct	117,733	64,408	3,163	61,245	53,325	2,902	50,423	7,142	3,982	633	3,349	3,160	536	2,624
Nov	117,386	64,337	3,120	61,217	53,049	2,853	50,196	7,337	4,109	644	3,465	3,228	528	2,700
Dec	117,574	64,327	3,139	61,188	53,247	2,858	50,389	7,600	4,277	662	3,615	3,323	530	2,793

[1] See footnote 6, Table B–32.

Note.—See Note, Table B–32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–34.—*Civilian employment by demographic characteristic, 1954–90*

[Thousands of persons 16 years of age and over; monthly data seasonally adjusted]

Year or month	All civilian workers	White				Black and other				Black			
		Total	Males	Fe-males	Both sexes 16–19	Total	Males	Fe-males	Both sexes 16–19	Total	Males	Fe-males	Both sexes 16–19
1954	60,109	53,957	37,846	16,111	3,078	6,152	3,773	2,379	396	....	....	....	....
1955	62,170	55,833	38,719	17,114	3,225	6,341	3,904	2,437	418	....	....	....	....
1956	63,799	57,269	39,368	17,901	3,389	6,534	4,013	2,521	430	....	....	....	....
1957	64,071	57,465	39,349	18,116	3,374	6,604	4,006	2,598	407	....	....	....	....
1958	63,036	56,613	38,591	18,022	3,216	6,423	3,833	2,590	365	....	....	....	....
1959	64,630	58,006	39,494	18,512	3,475	6,623	3,971	2,652	362	....	....	....	....
1960	65,778	58,850	39,755	19,095	3,700	6,928	4,149	2,779	430	....	....	....	....
1961	65,746	58,913	39,588	19,325	3,693	6,833	4,068	2,765	414	....	....	....	....
1962	66,702	59,698	40,016	19,682	3,774	7,003	4,160	2,843	420	....	....	....	....
1963	67,762	60,622	40,428	20,194	3,851	7,140	4,229	2,911	404	....	....	....	....
1964	69,305	61,922	41,115	20,807	4,076	7,383	4,359	3,024	440	....	....	....	....
1965	71,088	63,446	41,844	21,602	4,562	7,643	4,496	3,147	474	....	....	....	....
1966	72,895	65,021	42,331	22,690	5,176	7,877	4,588	3,289	545	....	....	....	....
1967	74,372	66,361	42,833	23,528	5,114	8,011	4,646	3,365	568	....	....	....	....
1968	75,920	67,750	43,411	24,339	5,195	8,169	4,702	3,467	584	....	....	....	....
1969	77,902	69,518	44,048	25,470	5,508	8,384	4,770	3,614	609	....	....	....	....
1970	78,678	70,217	44,178	26,039	5,571	8,464	4,813	3,650	574	....	....	....	....
1971	79,367	70,878	44,595	26,283	5,670	8,488	4,796	3,692	538	....	....	....	....
1972	82,153	73,370	45,944	27,426	6,173	8,783	4,952	3,832	573	7,802	4,368	3,433	509
1973	85,064	75,708	47,085	28,623	6,623	9,356	5,265	4,092	647	8,128	4,527	3,601	570
1974	86,794	77,184	47,674	29,511	6,796	9,610	5,352	4,258	652	8,203	4,527	3,677	554
1975	85,846	76,411	46,697	29,714	6,487	9,435	5,161	4,275	615	7,894	4,275	3,618	507
1976	88,752	78,853	47,775	31,078	6,724	9,899	5,363	4,536	611	8,227	4,404	3,823	508
1977	92,017	81,700	49,150	32,550	7,068	10,317	5,579	4,739	619	8,540	4,565	3,975	508
1978	96,048	84,936	50,544	34,392	7,367	11,112	5,936	5,177	703	9,102	4,796	4,307	571
1979	98,824	87,259	51,452	35,807	7,356	11,565	6,156	5,409	727	9,359	4,923	4,436	579
1980	99,303	87,715	51,127	36,587	7,021	11,588	6,059	5,529	689	9,313	4,798	4,515	547
1981	100,397	88,709	51,315	37,394	6,588	11,688	6,083	5,606	637	9,355	4,794	4,561	505
1982	99,526	87,903	50,287	37,615	5,984	11,624	5,983	5,641	565	9,189	4,637	4,552	428
1983	100,834	88,893	50,621	38,272	5,799	11,941	6,166	5,775	543	9,375	4,753	4,622	416
1984	105,005	92,120	52,462	39,659	5,836	12,885	6,629	6,256	607	10,119	5,124	4,995	474
1985	107,150	93,736	53,046	40,690	5,768	13,414	6,845	6,569	666	10,501	5,270	5,231	532
1986	109,597	95,660	53,785	41,876	5,792	13,937	7,107	6,830	681	10,814	5,428	5,386	536
1987	112,440	97,789	54,647	43,142	5,898	14,652	7,459	7,192	742	11,309	5,661	5,648	587
1988	114,968	99,812	55,550	44,262	6,030	15,156	7,722	7,434	774	11,658	5,824	5,834	601
1989	117,342	101,584	56,352	45,232	5,946	15,757	7,963	7,795	813	11,953	5,928	6,025	625
1990	117,914	102,087	56,432	45,654	5,518	15,827	8,003	7,825	743	11,966	5,915	6,051	573
1989: Jan	116,708	101,193	56,015	45,178	5,980	15,502	7,814	7,688	757	11,863	5,885	5,978	583
Feb	116,800	101,202	56,117	45,085	5,919	15,560	7,865	7,695	809	11,880	5,896	5,984	628
Mar	117,002	101,394	56,364	45,030	5,976	15,588	7,889	7,699	755	11,908	5,926	5,982	592
Apr	117,089	101,480	56,338	45,142	5,983	15,614	7,861	7,753	783	11,823	5,835	5,988	591
May	117,065	101,374	56,253	45,121	5,939	15,670	7,895	7,775	775	11,923	5,883	6,040	612
June	117,400	101,595	56,494	45,101	5,972	15,757	8,017	7,740	800	11,951	5,969	5,982	630
July	117,413	101,486	56,429	45,057	5,865	15,924	8,073	7,851	878	12,081	6,013	6,068	703
Aug	117,565	101,689	56,457	45,232	6,040	15,907	8,034	7,873	829	12,005	5,949	6,056	645
Sept	117,417	101,522	56,127	45,395	5,902	15,883	7,986	7,897	785	11,967	5,915	6,052	581
Oct	117,619	101,852	56,516	45,336	5,944	15,805	7,993	7,812	832	11,943	5,925	6,018	623
Nov	117,920	102,060	56,507	45,553	5,946	15,894	8,015	7,879	856	11,981	5,932	6,049	642
Dec	117,957	102,108	56,596	45,512	5,795	15,889	8,027	7,862	879	11,956	5,930	6,026	675
1990: Jan	117,945	102,112	56,578	45,534	5,788	15,841	7,932	7,909	856	11,980	5,855	6,125	671
Feb	118,074	102,145	56,554	45,591	5,765	15,912	8,012	7,900	797	12,026	5,925	6,101	608
Mar	118,235	102,208	56,564	45,644	5,801	15,995	8,053	7,942	824	12,092	5,942	6,150	629
Apr	118,090	102,088	56,444	45,644	5,682	15,998	8,075	7,923	813	12,098	5,948	6,150	627
May	118,277	102,293	56,496	45,797	5,614	15,963	8,051	7,912	766	12,128	5,948	6,180	587
June	118,237	102,332	56,457	45,875	5,521	15,870	8,009	7,861	742	12,044	5,957	6,087	559
July	117,882	102,189	56,337	45,852	5,394	15,677	7,946	7,731	687	11,884	5.887	5,997	528
Aug	117,690	101,996	56,278	45,718	5,201	15,702	7,918	7,784	675	11,838	5,848	5,990	511
Sept	117,883	102,192	56,461	45,731	5,416	15,674	7,927	7,747	704	11,869	5,888	5,981	556
Oct	117,733	102,017	56,410	45,607	5,370	15,755	8,003	7,752	696	11,913	5,922	5,991	550
Nov	117,386	101,648	56,332	45,316	5,316	15,771	8,037	7,734	688	11,897	5,930	5,967	542
Dec	117,574	101,843	56,282	45,561	5,345	15,774	8,067	7,707	662	11,836	5,926	5,910	504

Note.—See footnote 6 and Note, Table B–32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–35.—*Unemployment by demographic characteristic, 1954–90*

[Thousands of persons 16 years of age and over; monthly data seasonally adjusted]

Year or month	All civilian workers	White				Black and other				Black			
		Total	Males	Females	Both sexes 16–19	Total	Males	Females	Both sexes 16–19	Total	Males	Females	Both sexes 16–19
1954	3,532	2,859	1,913	946	423	673	431	242	79	....	....	....	....
1955	2,852	2,252	1,478	774	373	601	376	225	77	....	....	....	....
1956	2,750	2,159	1,366	793	382	591	345	246	95	....	....	....	....
1957	2,859	2,289	1,477	812	401	570	364	206	96	....	....	....	....
1958	4,602	3,680	2,489	1,191	541	923	610	313	138	....	....	....	....
1959	3,740	2,946	1,903	1,043	525	793	517	276	128	....	....	....	....
1960	3,852	3,065	1,988	1,077	575	788	498	290	138	....	....	....	....
1961	4,714	3,743	2,398	1,345	669	971	599	372	159	....	....	....	....
1962	3,911	3,052	1,915	1,137	580	861	509	352	142	....	....	....	....
1963	4,070	3,208	1,976	1,232	708	863	496	367	176	....	....	....	....
1964	3,786	2,999	1,779	1,220	708	787	426	361	165	....	....	....	....
1965	3,366	2,691	1,556	1,135	705	678	360	318	171	....	....	....	....
1966	2,875	2,255	1,241	1,014	651	622	310	312	186	....	....	....	....
1967	2,975	2,338	1,208	1,130	635	638	300	338	203	....	....	....	....
1968	2,817	2,226	1,142	1,084	644	590	277	313	194	....	....	....	....
1969	2,832	2,260	1,137	1,123	660	571	267	304	193	....	....	....	....
1970	4,093	3,339	1,857	1,482	871	754	380	374	235	....	....	....	....
1971	5,016	4,085	2,309	1,777	1,011	930	481	450	249	....	....	....	....
1972	4,882	3,906	2,173	1,733	1,021	977	486	491	288	906	448	458	279
1973	4,365	3,442	1,836	1,606	955	924	440	484	280	846	395	451	262
1974	5,156	4,097	2,169	1,927	1,104	1,058	544	514	318	965	494	470	297
1975	7,929	6,421	3,627	2,794	1,413	1,507	815	692	355	1,369	741	629	330
1976	7,406	5,914	3,258	2,656	1,364	1,492	779	713	355	1,334	698	637	330
1977	6,991	5,441	2,883	2,558	1,284	1,550	784	766	379	1,393	698	695	354
1978	6,202	4,698	2,411	2,287	1,189	1,505	731	774	394	1,330	641	690	360
1979	6,137	4,664	2,405	2,260	1,193	1,473	714	759	362	1,319	636	683	333
1980	7,637	5,884	3,345	2,540	1,291	1,752	922	830	377	1,553	815	738	343
1981	8,273	6,343	3,580	2,762	1,374	1,930	997	933	388	1,731	891	840	357
1982	10,678	8,241	4,846	3,395	1,534	2,437	1,334	1,104	443	2,142	1,167	975	396
1983	10,717	8,128	4,859	3,270	1,387	2,588	1,401	1,187	441	2,272	1,213	1,059	392
1984	8,539	6,372	3,600	2,772	1,116	2,167	1,144	1,022	384	1,914	1,003	911	353
1985	8,312	6,191	3,426	2,765	1,074	2,121	1,095	1,026	394	1,864	951	913	357
1986	8,237	6,140	3,433	2,708	1,070	2,097	1,097	999	383	1,840	946	894	347
1987	7,425	5,501	3,132	2,369	995	1,924	969	955	353	1,684	826	858	312
1988	6,701	4,944	2,766	2,177	910	1,757	888	869	316	1,547	771	776	288
1989	6,528	4,770	2,636	2,135	863	1,757	889	868	331	1,544	773	772	300
1990	6,874	5,091	2,866	2,225	856	1,783	933	850	292	1,527	793	734	258
1989: Jan	6,643	4,892	2,763	2,129	970	1,796	924	872	344	1,588	791	797	308
Feb	6,347	4,562	2,613	1,949	834	1,808	925	883	334	1,584	811	773	304
Mar	6,252	4,543	2,494	2,049	812	1,719	867	852	314	1,487	744	743	281
Apr	6,465	4,723	2,583	2,140	843	1,702	908	794	312	1,487	788	699	294
May	6,419	4,677	2,509	2,168	862	1,704	862	842	316	1,518	769	749	297
June	6,662	4,826	2,598	2,228	908	1,828	879	949	368	1,632	783	849	341
July	6,580	4,860	2,582	2,278	855	1,704	818	886	299	1,496	707	789	272
Aug	6,504	4,787	2,596	2,191	865	1,696	869	827	312	1,496	759	737	277
Sept	6,579	4,810	2,777	2,033	816	1,780	881	899	382	1,555	764	791	340
Oct	6,587	4,792	2,658	2,134	841	1,786	910	876	335	1,557	778	779	305
Nov	6,628	4,855	2,708	2,147	875	1,780	912	868	337	1,584	792	792	297
Dec	6,585	4,857	2,667	2,190	868	1,760	915	845	314	1,544	802	742	280
1990: Jan	6,544	4,840	2,690	2,150	849	1,753	949	804	288	1,537	825	712	254
Feb	6,579	4,945	2,722	2,223	861	1,650	842	808	275	1,438	722	716	247
Mar	6,563	4,895	2,712	2,183	866	1,684	880	804	287	1,448	742	706	256
Apr	6,691	5,002	2,795	2,207	859	1,650	853	797	271	1,436	735	701	240
May	6,662	4,930	2,755	2,175	876	1,680	860	820	282	1,442	730	712	250
June	6,560	4,852	2,719	2,133	791	1,690	901	789	284	1,444	756	688	254
July	6,827	5,007	2,827	2,180	854	1,802	953	849	284	1,522	807	715	250
Aug	7,015	5,170	2,925	2,245	865	1,825	948	877	305	1,563	813	750	272
Sept	7,087	5,199	2,937	2,262	872	1,894	1,017	877	275	1,607	860	747	234
Oct	7,142	5,260	2,989	2,271	866	1,866	978	888	301	1,580	835	745	259
Nov	7,337	5,400	3,093	2,307	847	1,947	1,026	921	327	1,653	855	798	295
Dec	7,600	5,674	3,298	2,376	870	1,964	1,015	949	322	1,650	845	805	284

Note.—See footnote 6 and Note, Table B–32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-36.—*Labor force participation rate and employment/population ratio, 1948–90*

[Percent; monthly data seasonally adjusted]

Year or month	Labor force participation rate								Employment/population ratio							
	Total [1]	Civilian [2]							Total [3]	Civilian [4]						
		Total	Males	Females	Both sexes 16–19 years	White	Black and other	Black		Total	Males	Females	Both sexes 16–19 years	White	Black and other	Black
1948	......	58.8	86.6	32.7	52.5	......	......	......	......	56.6	83.5	31.3	47.7	......	......	
1949	......	58.9	86.4	33.1	52.2	......	......	......	......	55.4	81.3	31.2	45.2	......	......	
1950	59.7	59.2	86.4	33.9	51.8	......	......	......	56.6	56.1	82.0	32.0	45.5	......	......	......
1951	60.1	59.2	86.3	34.6	52.2	......	......	......	58.2	57.3	84.0	33.1	47.9	......	......	......
1952	60.0	59.0	86.3	34.7	51.3	......	......	......	58.2	57.3	83.9	33.4	46.9	......	......	......
1953	59.7	58.9	86.0	34.4	50.2	......	......	......	58.0	57.1	83.6	33.3	46.4	......	......	......
1954	59.6	58.8	85.5	34.6	48.3	58.2	64.0	......	56.4	55.5	81.0	32.5	42.3	55.2	58.0	......
1955	60.0	59.3	85.4	35.7	48.9	58.7	64.2	......	57.5	56.7	81.8	34.0	43.5	56.5	58.7	......
1956	60.7	60.0	85.5	36.9	50.9	59.4	64.9	......	58.2	57.5	82.3	35.1	45.3	57.3	59.5	......
1957	60.3	59.6	84.8	36.9	49.6	59.1	64.4	......	57.8	57.1	81.3	35.1	43.9	56.8	59.3	......
1958	60.1	59.5	84.2	37.1	47.4	58.9	64.8	......	56.1	55.4	78.5	34.5	39.9	55.3	56.7	......
1959	59.9	59.3	83.7	37.1	46.7	58.7	64.3	......	56.7	56.0	79.3	35.0	39.9	55.9	57.5	......
1960	60.0	59.4	83.3	37.7	47.5	58.8	64.5	......	56.8	56.1	78.9	35.5	40.5	55.9	57.9	......
1961	60.0	59.3	82.9	38.1	46.9	58.8	64.1	......	56.1	55.4	77.6	35.4	39.1	55.3	56.2	......
1962	59.5	58.8	82.0	37.9	46.1	58.3	63.2	......	56.3	55.5	77.7	35.6	39.4	55.4	56.3	......
1963	59.3	58.7	81.4	38.3	45.2	58.2	63.0	......	56.1	55.4	77.1	35.8	37.4	55.3	56.2	......
1964	59.4	58.7	81.0	38.7	44.5	58.2	63.1	......	56.4	55.7	77.3	36.3	37.3	55.5	57.0	......
1965	59.5	58.9	80.7	39.3	45.7	58.4	62.9	......	56.9	56.2	77.5	37.1	38.9	56.0	57.8	......
1966	59.8	59.2	80.4	40.3	48.2	58.7	63.0	......	57.6	56.9	77.9	38.3	42.1	56.8	58.4	......
1967	60.2	59.6	80.4	41.1	48.4	59.2	62.8	......	58.0	57.3	78.0	39.0	42.2	57.2	58.2	......
1968	60.3	59.6	80.1	41.6	48.3	59.3	62.2	......	58.2	57.5	77.8	39.6	42.2	57.4	58.0	......
1969	60.8	60.1	79.8	42.7	49.4	59.9	62.1	......	58.7	58.0	77.6	40.7	43.4	58.0	58.1	......
1970	61.0	60.4	79.7	43.3	49.9	60.2	61.8	......	58.0	57.4	76.2	40.8	42.3	57.5	56.8	......
1971	60.7	60.2	79.1	43.4	49.7	60.1	60.9	......	57.2	56.6	74.9	40.4	41.3	56.8	54.9	......
1972	60.9	60.4	78.9	43.9	51.9	60.4	60.2	59.9	57.5	57.0	75.0	41.0	43.5	57.4	54.1	53.7
1973	61.3	60.8	78.8	44.7	53.7	60.8	60.5	60.2	58.3	57.8	75.5	42.0	45.9	58.2	55.0	54.5
1974	61.7	61.3	78.7	45.7	54.8	61.4	60.3	59.8	58.3	57.8	74.9	42.6	46.0	58.3	54.3	53.5
1975	61.6	61.2	77.9	46.3	54.0	61.5	59.6	58.8	56.5	56.1	71.7	42.0	43.3	56.7	51.4	50.1
1976	62.0	61.6	77.5	47.3	54.5	61.8	59.8	59.0	57.3	56.8	72.0	43.2	44.2	57.5	52.0	50.8
1977	62.6	62.3	77.7	48.4	56.0	62.5	60.4	59.8	58.3	57.9	72.8	44.5	46.1	58.6	52.5	51.4
1978	63.5	63.2	77.9	50.0	57.8	63.3	62.2	61.5	59.7	59.3	73.8	46.4	48.3	60.0	54.7	53.6
1979	64.0	63.7	77.8	50.9	57.9	63.9	62.2	61.4	60.3	59.9	73.8	47.5	48.5	60.6	55.2	53.8
1980	64.1	63.8	77.4	51.5	56.7	64.1	61.7	61.0	59.6	59.2	72.0	47.7	46.6	60.0	53.6	52.3
1981	64.2	63.9	77.0	52.1	55.4	64.3	61.3	60.8	59.4	59.0	71.3	48.0	44.6	60.0	52.6	51.3
1982	64.3	64.0	76.6	52.6	54.1	64.3	61.6	61.0	58.2	57.8	69.0	47.7	41.5	58.8	50.9	49.4
1983	64.4	64.0	76.4	52.9	53.5	64.3	62.1	61.5	58.3	57.9	68.8	48.0	41.5	58.9	51.0	49.5
1984	64.7	64.4	76.4	53.6	53.9	64.6	62.6	62.2	59.9	59.5	70.7	49.5	43.7	60.5	53.6	52.3
1985	65.1	64.8	76.3	54.5	54.5	65.0	63.3	62.9	60.5	60.1	70.9	50.4	44.4	61.0	54.7	53.4
1986	65.6	65.3	76.3	55.3	54.7	65.5	63.7	63.3	61.1	60.7	71.0	51.4	44.6	61.5	55.4	54.1
1987	65.9	65.6	76.2	56.0	54.7	65.8	64.3	63.8	61.9	61.5	71.5	52.5	45.5	62.3	56.8	55.6
1988	66.2	65.9	76.2	56.6	55.3	66.2	64.0	63.8	62.6	62.3	72.0	53.4	46.8	63.1	57.4	56.3
1989	66.8	66.5	76.4	57.4	55.9	66.7	64.7	64.2	63.3	63.0	72.5	54.3	47.5	63.8	58.2	56.9
1990	66.6	66.4	76.1	57.5	53.7	66.8	63.7	63.3	63.0	62.7	71.9	54.3	45.4	63.6	57.3	56.2
1989: Jan	66.7	66.4	76.3	57.5	55.7	66.8	64.6	64.4	63.2	62.9	72.2	54.4	46.6	63.7	57.9	56.8
Feb	66.6	66.3	76.3	57.1	55.1	66.5	64.7	64.4	63.2	62.9	72.4	54.3	46.9	63.7	58.0	56.8
Mar	66.6	66.3	76.3	57.2	55.0	66.6	64.4	64.0	63.3	62.9	72.6	54.2	47.2	63.8	58.0	56.9
Apr	66.7	66.4	76.5	57.3	55.6	66.8	64.3	63.5	63.3	62.9	72.5	54.3	47.5	63.8	58.0	56.4
May	66.6	66.3	76.3	57.3	55.6	66.6	64.4	64.0	63.2	62.9	72.4	54.2	47.3	63.7	58.1	56.8
June	66.9	66.6	76.7	57.4	56.7	66.8	65.1	64.6	63.3	63.0	72.7	54.2	47.7	63.8	58.3	56.9
July	66.8	66.5	76.4	57.4	55.7	66.7	65.1	64.5	63.3	63.0	72.6	54.2	47.5	63.7	58.3	57.4
Aug	66.8	66.5	76.5	57.4	56.7	66.8	64.9	64.1	63.3	63.0	72.5	54.3	48.4	63.8	58.6	57.0
Sept	66.7	66.4	76.2	57.5	55.7	66.6	65.0	64.1	63.2	62.9	72.1	54.6	47.3	63.6	58.4	56.8
Oct	66.8	66.5	76.5	57.3	56.3	66.8	64.6	64.0	63.3	62.9	72.5	54.3	48.0	63.8	58.0	56.6
Nov	66.9	66.6	76.4	57.6	56.6	66.9	64.8	64.2	63.4	63.1	72.4	54.6	48.0	63.9	58.3	56.7
Dec	66.8	66.5	76.5	57.5	55.9	66.9	64.6	63.8	63.4	63.0	72.5	54.4	47.5	63.9	58.1	56.5
1990: Jan	66.8	66.5	76.3	57.5	55.3	66.9	64.3	63.9	63.3	63.0	72.3	54.5	47.2	63.8	57.9	56.6
Feb	66.8	66.5	76.3	57.6	55.1	66.9	64.1	63.5	63.3	63.0	72.3	54.5	46.9	63.8	58.1	56.8
Mar	66.8	66.5	76.3	57.7	56.1	66.9	64.4	63.8	63.4	63.0	72.3	54.6	47.9	63.8	58.3	57.0
Apr	66.8	66.5	76.2	57.6	55.2	66.9	64.2	63.8	63.2	62.9	72.2	54.5	47.0	63.7	58.2	57.0
May	66.8	66.5	76.2	57.7	54.6	66.9	64.0	63.8	63.3	63.0	72.1	54.6	46.2	63.8	57.9	57.0
June	66.7	66.4	76.0	57.6	53.2	66.8	63.6	63.4	63.2	62.9	72.0	54.6	45.4	63.8	57.5	56.6
July	66.6	66.3	75.9	57.6	52.5	66.8	63.2	62.9	63.0	62.7	71.6	54.5	44.2	63.7	56.7	55.7
Aug	66.5	66.2	75.8	57.5	51.3	66.7	63.2	62.8	62.8	62.5	71.5	54.3	42.8	63.5	56.7	55.5
Sept	66.6	66.3	76.1	57.4	53.1	66.9	63.3	63.1	62.9	62.6	71.7	54.2	44.8	63.6	56.5	55.6
Oct	66.5	66.2	76.1	57.3	53.0	66.7	63.4	63.1	62.8	62.4	71.7	54.1	44.4	63.5	56.7	55.7
Nov	66.4	66.1	76.1	57.0	52.4	66.6	63.6	63.3	62.5	62.2	71.5	53.7	43.8	63.2	56.6	55.5
Dec	66.6	66.3	76.2	57.3	52.8	66.8	63.5	62.9	62.6	62.3	71.4	53.9	44.0	63.3	56.5	55.2

[1] Labor force including resident Armed Forces as percent of noninstitutional population including resident Armed Forces.

[2] Civilian labor force as percent of civilian noninstitutional population in group specified.

[3] Employment including resident Armed Forces as percent of noninstitutional population including resident Armed Forces.

[4] Civilian employment as percent of civilian noninstitutional population in group specified.

Note.—Data relate to persons 16 years of age and over.

See footnote 6 and Note, Table B-32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–37.—*Civilian labor force participation rate by demographic characteristic, 1954–90*

[Percent;[1] monthly data seasonally adjusted]

Year or month	All civilian workers	White							Black and other or black						
		Total	Males			Females			Total	Males			Females		
			Total	16–19 years	20 years and over	Total	16–19 years	20 years and over		Total	16–19 years	20 years and over	Total	16–19 years	20 years and over
									Black and other						
1954	58.8	58.2	85.6	57.6	87.8	33.3	40.6	32.7	64.0	85.2	61.2	87.1	46.1	31.0	47.7
1955	59.3	58.7	85.4	58.6	87.5	34.5	40.7	34.0	64.2	85.1	60.8	87.8	46.1	32.7	47.5
1956	60.0	59.4	85.6	60.4	87.6	35.7	43.1	35.1	64.9	85.1	61.5	87.8	47.3	36.3	48.4
1957	59.6	59.1	84.8	59.2	86.9	35.7	42.2	35.2	64.4	84.2	58.8	87.0	47.1	33.2	48.6
1958	59.5	58.9	84.3	56.5	86.6	35.8	40.1	35.5	64.8	84.1	57.3	87.1	48.0	31.9	49.8
1959	59.3	58.7	83.8	55.9	86.3	36.0	39.6	35.6	64.3	83.4	55.5	86.7	47.7	28.2	49.8
1960	59.4	58.8	83.4	55.9	86.0	36.5	40.3	36.2	64.5	83.0	57.6	86.2	48.2	32.9	49.9
1961	59.3	58.8	83.0	54.5	85.7	36.9	40.6	36.6	64.1	82.2	55.8	85.5	48.3	32.8	50.1
1962	58.8	58.3	82.1	53.8	84.9	36.7	39.8	36.5	63.2	80.8	53.5	84.2	48.0	33.1	49.6
1963	58.7	58.2	81.5	53.1	84.4	37.2	38.7	37.0	63.0	80.2	51.5	83.9	48.1	32.6	49.9
1964	58.7	58.2	81.1	52.7	84.2	37.5	37.8	37.5	63.1	80.1	49.9	84.1	48.6	31.7	50.7
1965	58.9	58.4	80.8	54.1	83.9	38.1	39.2	38.0	62.9	79.6	51.3	83.7	48.6	29.5	51.1
1966	59.2	58.7	80.6	55.9	83.6	39.2	42.6	38.8	63.0	79.0	51.4	83.3	49.4	33.5	51.6
1967	59.6	59.2	80.6	56.3	83.5	40.1	42.5	39.8	62.8	78.5	51.1	82.9	49.5	35.2	51.6
1968	59.6	59.3	80.4	55.9	83.2	40.7	43.0	40.4	62.2	77.7	49.7	82.2	49.3	34.8	51.4
1969	60.1	59.9	80.2	56.8	83.0	41.8	44.6	41.5	62.1	76.9	49.6	81.4	49.8	34.6	52.0
1970	60.4	60.2	80.0	57.5	82.8	42.6	45.6	42.2	61.8	76.5	47.4	81.4	49.5	34.1	51.8
1971	60.2	60.1	79.6	57.9	82.3	42.6	45.4	42.3	60.9	74.9	44.7	80.0	49.2	31.2	51.8
1972	60.4	60.4	79.6	60.1	82.0	43.2	48.1	42.7	60.2	73.9	46.0	78.6	48.8	32.3	51.2
									Black						
1972	60.4	60.4	79.6	60.1	82.0	43.2	48.1	42.7	59.9	73.6	46.3	78.5	48.7	32.2	51.2
1973	60.8	60.8	79.4	62.0	81.6	44.1	50.1	43.5	60.2	73.4	45.7	78.4	49.3	34.2	51.6
1974	61.3	61.4	79.4	62.9	81.4	45.2	51.7	44.4	59.8	72.9	46.7	77.6	49.0	33.4	51.4
1975	61.2	61.5	78.7	61.9	80.7	45.9	51.5	45.3	58.8	70.9	42.6	76.0	48.8	34.2	51.1
1976	61.6	61.8	78.4	62.3	80.3	46.9	52.8	46.2	59.0	70.0	41.3	75.4	49.8	32.9	52.5
1977	62.3	62.5	78.5	64.0	80.2	48.0	54.5	47.3	59.8	70.6	43.2	75.6	50.8	32.9	53.6
1978	63.2	63.3	78.6	65.0	80.1	49.4	56.7	48.7	61.5	71.5	44.9	76.2	53.1	37.3	55.5
1979	63.7	63.9	78.6	64.8	80.1	50.5	57.4	49.8	61.4	71.3	43.6	76.3	53.1	36.8	55.4
1980	63.8	64.1	78.2	63.7	79.8	51.2	56.2	50.6	61.0	70.3	43.2	75.1	53.1	34.9	55.6
1981	63.9	64.3	77.9	62.4	79.5	51.9	55.4	51.5	60.8	70.0	41.6	74.5	53.5	34.0	56.0
1982	64.0	64.3	77.4	60.0	79.2	52.4	55.0	52.2	61.0	70.1	39.8	74.7	53.7	33.5	56.2
1983	64.0	64.3	77.1	59.4	78.9	52.7	54.5	52.5	61.5	70.6	39.9	75.2	54.2	33.0	56.8
1984	64.4	64.6	77.1	59.0	78.7	53.3	55.4	53.1	62.2	70.8	41.7	74.8	55.2	35.0	57.6
1985	64.8	65.0	77.0	59.7	78.5	54.1	55.2	54.0	62.9	70.8	44.6	74.4	56.5	37.9	58.6
1986	65.3	65.5	76.9	59.3	78.5	55.0	56.3	54.9	63.3	71.2	43.7	74.8	56.9	39.1	58.9
1987	65.6	65.8	76.8	59.0	78.4	55.7	56.5	55.6	63.8	71.1	43.6	74.7	58.0	39.6	60.0
1988	65.9	66.2	76.9	60.0	78.3	56.4	57.2	56.3	63.8	71.0	43.8	74.6	58.0	37.9	60.1
1989	66.5	66.7	77.1	61.0	78.5	57.2	57.1	57.2	64.2	71.0	44.6	74.4	58.7	40.4	60.6
1990	66.4	66.8	76.9	59.4	78.3	57.5	55.4	57.6	63.3	70.1	40.6	73.8	57.8	36.7	60.0
1989: Jan	66.4	66.8	77.1	60.9	78.5	57.2	58.1	57.2	64.4	71.2	43.5	74.8	58.9	38.5	61.0
Feb	66.3	66.5	77.0	59.6	78.5	56.9	56.2	56.9	64.4	71.5	46.5	74.7	58.7	39.3	60.7
Mar	66.3	66.6	77.1	60.6	78.5	56.9	56.1	57.0	64.0	71.0	42.5	74.7	58.3	37.9	60.5
Apr	66.4	66.8	77.2	60.7	78.6	57.1	57.0	57.1	63.5	70.4	41.3	74.1	57.9	40.2	59.8
May	66.3	66.6	76.9	60.7	78.3	57.1	56.8	57.1	64.0	70.6	41.0	74.4	58.7	42.6	60.4
June	66.6	66.8	77.3	61.2	78.6	57.1	57.8	57.1	64.6	71.6	50.4	74.3	59.0	39.0	61.1
July	66.5	66.7	77.1	60.8	78.5	57.1	55.7	57.2	64.5	71.1	47.8	74.1	59.2	42.0	61.0
Aug	66.5	66.8	77.2	62.3	78.4	57.2	57.8	57.1	64.1	70.9	46.3	74.1	58.5	38.6	60.6
Sept	66.4	66.6	76.9	60.2	78.3	57.2	57.0	57.2	64.1	70.6	40.7	74.5	58.9	43.1	60.5
Oct	66.5	66.8	77.2	61.5	78.5	57.2	57.3	57.2	64.0	70.7	44.6	74.1	58.4	40.6	60.3
Nov	66.6	66.9	77.2	61.4	78.5	57.4	58.4	57.4	64.2	70.8	45.7	74.1	58.8	40.9	60.6
Dec	66.5	66.9	77.2	60.5	78.6	57.4	56.9	57.4	63.8	70.8	47.1	73.8	58.0	41.2	59.8
1990: Jan	66.5	66.9	77.2	60.9	78.5	57.4	56.5	57.4	63.9	70.3	45.0	73.5	58.6	40.3	60.5
Feb	66.5	66.9	77.1	60.6	78.4	57.5	57.0	57.5	63.5	69.9	41.2	73.6	58.4	36.9	60.6
Mar	66.5	66.9	77.1	60.6	78.4	57.5	58.1	57.5	63.8	70.2	43.6	73.5	58.7	38.7	60.7
Apr	66.5	66.9	77.0	60.9	78.3	57.5	56.3	57.6	63.8	70.1	42.3	73.6	58.6	38.3	60.6
May	66.5	66.9	76.9	60.1	78.3	57.6	56.3	57.7	63.8	69.9	40.5	73.6	58.9	37.3	61.1
June	66.4	66.8	76.8	58.6	78.2	57.6	55.0	57.8	63.4	70.2	39.2	74.1	57.8	36.6	59.9
July	66.3	66.8	76.7	58.3	78.2	57.6	54.6	57.8	62.9	69.9	38.0	73.9	57.2	34.7	59.5
Aug	66.2	66.7	76.7	56.7	78.3	57.5	53.1	57.8	62.8	69.5	37.9	73.4	57.3	35.3	59.6
Sept	66.3	66.9	76.9	59.0	78.3	57.5	55.2	57.7	63.1	70.3	40.2	74.1	57.2	33.9	59.5
Oct	66.2	66.7	76.9	59.2	78.3	57.4	54.5	57.6	63.1	70.4	39.7	74.1	57.2	36.3	59.3
Nov	66.1	66.6	76.9	58.8	78.3	57.0	53.8	57.2	63.3	70.5	40.5	74.3	57.4	37.2	59.4
Dec	66.3	66.8	77.0	59.4	78.3	57.4	54.5	57.6	62.9	70.3	38.9	74.1	56.9	35.0	59.0

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[1] Civilian labor force as percent of civilian noninstitutional population in group specified.

Note.—Data relate to persons 16 years of age and over.
See footnote 6 and Note, Table B–32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–38.—*Civilian employment/population ratio by demographic characteristic, 1954–90*

[Percent;[1] monthly data seasonally adjusted]

Year or month	All civilian workers	White							Black and other or black						
		Total	Males			Females			Total	Males			Females		
			Total	16–19 years	20 years and over	Total	16–19 years	20 years and over		Total	16–19 years	20 years and over	Total	16–19 years	20 years and over
									Black and other						
1954	55.5	55.2	81.5	49.9	84.0	31.4	36.4	31.1	58.0	76.5	52.4	79.2	41.9	24.7	43.7
1955	56.7	56.5	82.2	52.0	84.7	33.0	37.0	32.7	58.7	77.6	52.7	80.4	42.2	26.4	43.9
1956	57.5	57.3	82.7	54.1	85.0	34.2	38.9	33.8	59.5	78.4	52.2	81.3	43.0	28.0	44.7
1957	57.1	56.8	81.8	52.4	84.1	34.2	38.2	33.9	59.3	77.2	48.0	80.5	43.7	26.5	45.5
1958	55.4	55.3	79.2	47.6	81.8	33.6	35.0	33.5	56.7	72.5	42.0	76.0	42.8	22.8	45.0
1959	56.0	55.9	79.9	48.1	82.8	34.0	34.8	34.0	57.5	73.8	41.4	77.6	43.2	20.3	45.7
1960	56.1	55.9	79.4	48.1	82.4	34.6	35.1	34.5	57.9	74.1	43.8	77.9	43.6	24.8	45.8
1961	55.4	55.3	78.2	45.9	81.4	34.5	34.6	34.5	56.2	71.7	41.0	75.5	42.6	23.2	44.8
1962	55.5	55.4	78.4	46.4	81.5	34.7	34.8	34.7	56.3	72.0	41.7	75.7	42.7	23.1	44.9
1963	55.4	55.3	77.7	44.7	81.1	35.0	32.9	35.2	56.2	71.8	37.4	76.2	42.7	21.3	45.2
1964	55.7	55.5	77.8	45.0	81.3	35.5	32.2	35.8	57.0	72.9	37.8	77.7	43.4	21.8	46.1
1965	56.2	56.0	77.9	47.1	81.5	36.2	33.7	36.5	57.8	73.7	39.4	78.7	44.1	20.2	47.3
1966	56.9	56.8	78.3	50.1	81.7	37.5	37.5	37.5	58.4	74.0	40.5	79.2	45.1	23.1	48.2
1967	57.3	57.2	78.4	50.2	81.7	38.3	37.7	38.3	58.2	73.8	38.8	79.4	45.0	24.8	47.9
1968	57.5	57.4	78.3	50.3	81.6	38.9	37.8	39.1	58.0	73.3	38.7	78.9	45.2	24.7	48.2
1969	58.0	58.0	78.2	51.1	81.4	40.1	39.5	40.1	58.1	72.8	39.0	78.4	45.9	25.1	48.9
1970	57.4	57.5	76.8	49.6	80.1	40.3	39.5	40.4	56.8	70.9	35.5	76.8	44.9	22.4	48.2
1971	56.6	56.8	75.7	49.2	79.0	39.9	38.6	40.1	54.9	68.1	31.8	74.2	43.9	20.2	47.3
1972	57.0	57.4	76.0	51.5	79.0	40.7	41.3	40.6	54.1	67.3	32.4	73.2	43.3	19.9	46.7
									Black						
1972	57.0	57.4	76.0	51.5	79.0	40.7	41.3	40.6	53.7	66.8	31.6	73.0	43.0	19.2	46.5
1973	57.8	58.2	76.5	54.3	79.2	41.8	43.6	41.6	54.5	67.5	32.8	73.7	43.8	22.0	47.2
1974	57.8	58.3	75.9	54.4	78.6	42.4	44.3	42.2	53.5	65.8	31.4	71.9	43.5	20.9	46.9
1975	56.1	56.7	73.0	50.6	75.7	42.0	42.5	41.9	50.1	60.6	26.3	66.5	41.6	20.2	44.9
1976	56.8	57.5	73.4	51.5	76.0	43.2	44.2	43.1	50.8	60.6	25.8	66.8	42.8	19.2	46.4
1977	57.9	58.6	74.1	54.4	76.5	44.5	45.9	44.4	51.4	61.4	26.4	67.5	43.3	18.5	47.0
1978	59.3	60.0	75.0	56.3	77.2	46.3	48.5	46.1	53.6	63.3	28.5	69.1	45.8	22.1	49.3
1979	59.9	60.6	75.1	55.7	77.3	47.5	49.4	47.3	53.8	63.4	28.7	69.1	46.0	22.4	49.3
1980	59.2	60.0	73.4	53.4	75.6	47.8	47.9	47.8	52.3	60.4	27.0	65.8	45.7	21.0	49.1
1981	59.0	60.0	72.8	51.3	75.1	48.3	46.2	48.5	51.3	59.1	24.6	64.5	45.1	19.7	48.5
1982	57.8	58.8	70.6	47.0	73.0	48.1	44.6	48.4	49.4	56.0	20.3	61.4	44.2	17.7	47.5
1983	57.9	58.9	70.4	47.4	72.6	48.5	44.5	48.9	49.5	56.3	20.4	61.6	44.1	17.0	47.4
1984	59.5	60.5	72.1	49.1	74.3	49.8	47.0	50.0	52.3	59.2	23.9	64.1	46.7	20.1	49.8
1985	60.1	61.0	72.3	49.9	74.3	50.7	47.1	51.0	53.4	60.0	26.3	64.6	48.1	23.1	50.9
1986	60.7	61.5	72.3	49.6	74.3	51.7	47.9	52.0	54.1	60.6	26.5	65.1	48.8	23.8	51.6
1987	61.5	62.3	72.7	49.9	74.7	52.8	49.0	53.1	55.6	62.0	28.5	66.4	50.3	25.8	53.0
1988	62.3	63.1	73.2	51.7	75.1	53.8	50.2	54.0	56.3	62.7	29.4	67.1	51.2	25.8	53.9
1989	63.0	63.8	73.7	52.6	75.4	54.6	50.5	54.9	56.9	62.8	30.4	67.0	52.0	27.1	54.6
1990	62.7	63.6	73.2	51.0	75.0	54.8	48.5	55.2	56.2	61.8	27.6	66.1	51.6	25.7	54.2
1989: Jan	62.9	63.7	73.5	51.0	75.4	54.7	51.3	54.9	56.8	62.8	28.0	67.3	52.0	25.6	54.7
Feb	62.9	63.7	73.6	51.2	75.4	54.5	50.3	54.8	56.8	62.8	31.2	66.9	51.9	26.6	54.6
Mar	62.9	63.8	73.9	52.6	75.6	54.4	50.2	54.8	56.9	63.1	30.1	67.3	51.9	24.5	54.8
Apr	62.9	63.8	73.8	52.7	75.6	54.5	50.5	54.8	56.4	62.0	26.2	66.6	51.9	28.1	54.4
May	62.9	63.7	73.6	52.2	75.4	54.5	50.4	54.8	56.8	62.4	26.3	67.1	52.2	29.9	54.6
June	63.0	63.8	73.9	52.7	75.6	54.4	50.6	54.7	56.9	63.3	34.0	67.0	51.7	24.0	54.6
July	63.0	63.7	73.8	53.1	75.5	54.4	48.5	54.8	57.4	63.6	36.6	67.1	52.4	28.2	54.9
Aug	63.0	63.8	73.8	54.2	75.4	54.5	50.8	54.8	57.0	62.9	32.8	66.8	52.2	26.6	54.9
Sept	62.9	63.6	73.3	52.3	75.0	54.7	50.7	55.0	56.8	62.5	26.6	67.2	52.1	26.3	54.8
Oct	62.9	63.8	73.8	53.0	75.4	54.6	51.0	54.9	56.6	62.5	30.2	66.7	51.7	27.0	54.3
Nov	63.1	63.9	73.7	52.8	75.4	54.8	51.6	55.1	56.7	62.5	31.1	66.5	51.9	28.1	54.4
Dec	63.0	63.9	73.8	52.1	75.5	54.8	50.0	55.1	56.5	62.4	33.3	66.1	51.7	29.0	54.0
1990: Jan	63.0	63.8	73.7	52.9	75.3	54.8	49.5	55.2	56.6	61.6	31.9	65.4	52.5	29.9	54.9
Feb	63.0	63.8	73.6	52.7	75.3	54.8	49.6	55.2	56.8	62.3	29.2	66.6	52.3	26.4	54.9
Mar	63.0	63.8	73.6	52.5	75.2	54.9	50.8	55.2	57.0	62.4	30.3	66.4	52.6	28.1	55.2
Apr	62.9	63.7	73.4	52.4	75.0	54.8	49.3	55.2	57.0	62.4	30.0	66.5	52.6	28.2	55.1
May	63.0	63.8	73.4	51.6	75.1	55.0	49.1	55.4	57.0	62.3	27.8	66.6	52.8	26.8	55.4
June	62.9	63.8	73.3	50.8	75.0	55.1	48.6	55.5	56.6	62.3	25.4	66.9	51.9	26.7	54.5
July	62.7	63.7	73.1	49.6	74.9	55.0	47.8	55.5	55.7	61.5	25.4	65.9	51.1	23.9	53.9
Aug	62.5	63.5	72.9	48.0	74.9	54.8	46.2	55.4	55.5	61.0	24.0	65.6	51.0	23.7	53.7
Sept	62.6	63.6	73.1	50.2	74.9	54.8	48.3	55.3	55.6	61.4	27.6	65.5	50.8	24.5	53.5
Oct	62.4	63.5	73.0	50.5	74.8	54.6	47.4	55.1	55.7	61.7	27.3	65.9	50.9	24.4	53.5
Nov	62.2	63.2	72.9	50.1	74.6	54.3	47.1	54.8	55.5	61.6	27.1	66.0	50.6	23.2	53.3
Dec	62.3	63.3	72.7	50.6	74.4	54.5	47.5	55.0	55.2	61.5	24.7	66.0	50.0	22.6	52.8

[1] Civilian employment as percent of civilian noninstitutional population in group specified.

Note.—Data relate to persons 16 years of age and over.
See footnote 6 and Note, Table B–32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-39.—*Unemployment rate, 1948–90*

[Percent; monthly data seasonally adjusted]

Year or month	Unemployment rate, all workers [1]	Unemployment rate, civilian workers [2]													
		All civilian workers	Males			Females			Both sexes 16–19 years	White	Black and other	Black	Experienced wage and salary workers	Married men, spouse present [3]	Women who maintain families
			Total	16–19 years	20 years and over	Total	16–19 years	20 years and over							
1948	......	3.8	3.6	9.8	3.2	4.1	8.3	3.6	9.2	3.5	5.9	......	4.3	......	......
1949	......	5.9	5.9	14.3	5.4	6.0	12.3	5.3	13.4	5.6	8.9	......	6.8	3.5	......
1950	5.2	5.3	5.1	12.7	4.7	5.7	11.4	5.1	12.2	4.9	9.0	......	6.0	4.6	......
1951	3.2	3.3	2.8	8.1	2.5	4.4	8.3	4.0	8.2	3.1	5.3	......	3.7	1.5	......
1952	2.9	3.0	2.8	8.9	2.4	3.6	8.0	3.2	8.5	2.8	5.4	......	3.4	1.4	......
1953	2.8	2.9	2.8	7.9	2.5	3.3	7.2	2.9	7.6	2.7	4.5	......	3.2	1.7	......
1954	5.4	5.5	5.3	13.5	4.9	6.0	11.4	5.5	12.6	5.0	9.9	......	6.2	4.0	......
1955	4.3	4.4	4.2	11.6	3.8	4.9	10.2	4.4	11.0	3.9	8.7	......	4.8	2.6	......
1956	4.0	4.1	3.8	11.1	3.4	4.8	11.2	4.2	11.1	3.6	8.3	......	4.4	2.3	......
1957	4.2	4.3	4.1	12.4	3.6	4.7	10.6	4.1	11.6	3.8	7.9	......	4.6	2.8	......
1958	6.6	6.8	6.8	17.1	6.2	6.8	14.3	6.1	15.9	6.1	12.6	......	7.3	5.1	......
1959	5.3	5.5	5.2	15.3	4.7	5.9	13.5	5.2	14.6	4.8	10.7	......	5.7	3.6	......
1960	5.4	5.5	5.4	15.3	4.7	5.9	13.9	5.1	14.7	5.0	10.2	......	5.7	3.7	......
1961	6.5	6.7	6.4	17.1	5.7	7.2	16.3	6.3	16.8	6.0	12.4	......	6.8	4.6	......
1962	5.4	5.5	5.2	14.7	4.6	6.2	14.6	5.4	14.7	4.9	10.9	......	5.6	3.6	......
1963	5.5	5.7	5.2	17.2	4.5	6.5	17.2	5.4	17.2	5.0	10.8	......	5.6	3.4	......
1964	5.0	5.2	4.6	15.8	3.9	6.2	16.6	5.2	16.2	4.6	9.6	......	5.0	2.8	......
1965	4.4	4.5	4.0	14.1	3.2	5.5	15.7	4.5	14.8	4.1	8.1	......	4.3	2.4	......
1966	3.7	3.8	3.2	11.7	2.5	4.8	14.1	3.8	12.8	3.4	7.3	......	3.5	1.9	......
1967	3.7	3.8	3.1	12.3	2.3	5.2	13.5	4.2	12.9	3.4	7.4	......	3.6	1.8	4.9
1968	3.5	3.6	2.9	11.6	2.2	4.8	14.0	3.8	12.7	3.2	6.7	......	3.4	1.6	4.4
1969	3.4	3.5	2.8	11.4	2.1	4.7	13.3	3.7	12.2	3.1	6.4	......	3.3	1.5	4.4
1970	4.8	4.9	4.4	15.0	3.5	5.9	15.6	4.8	15.3	4.5	8.2	......	4.8	2.6	5.4
1971	5.8	5.9	5.3	16.6	4.4	6.9	17.2	5.7	16.9	5.4	9.9	......	5.7	3.2	7.3
1972	5.5	5.6	5.0	15.9	4.0	6.6	16.7	5.4	16.2	5.1	10.0	10.4	5.3	2.8	7.2
1973	4.8	4.9	4.2	13.9	3.3	6.0	15.3	4.9	14.5	4.3	9.0	9.4	4.5	2.3	7.1
1974	5.5	5.6	4.9	15.6	3.8	6.7	16.6	5.5	16.0	5.0	9.9	10.5	5.3	2.7	7.0
1975	8.3	8.5	7.9	20.1	6.8	9.3	19.7	8.0	19.9	7.8	13.8	14.8	8.2	5.1	10.0
1976	7.6	7.7	7.1	19.2	5.9	8.6	18.7	7.4	19.0	7.0	13.1	14.0	7.3	4.2	10.1
1977	6.9	7.1	6.3	17.3	5.2	8.2	18.3	7.0	17.8	6.2	13.1	14.0	6.6	3.6	9.4
1978	6.0	6.1	5.3	15.8	4.3	7.2	17.1	6.0	16.4	5.2	11.9	12.8	5.6	2.8	8.5
1979	5.8	5.8	5.1	15.9	4.2	6.8	16.4	5.7	16.1	5.1	11.3	12.3	5.5	2.8	8.3
1980	7.0	7.1	6.9	18.3	5.9	7.4	17.2	6.4	17.8	6.3	13.1	14.3	6.9	4.2	9.2
1981	7.5	7.6	7.4	20.1	6.3	7.9	19.0	6.8	19.6	6.7	14.2	15.6	7.3	4.3	10.4
1982	9.5	9.7	9.9	24.4	8.8	9.4	21.9	8.3	23.2	8.6	17.3	18.9	9.3	6.5	11.7
1983	9.5	9.6	9.9	23.3	8.9	9.2	21.3	8.1	22.4	8.4	17.8	19.5	9.2	6.5	12.2
1984	7.4	7.5	7.4	19.6	6.6	7.6	18.0	6.8	18.9	6.5	14.4	15.9	7.1	4.6	10.3
1985	7.1	7.2	7.0	19.5	6.2	7.4	17.6	6.6	18.6	6.2	13.7	15.1	6.8	4.3	10.4
1986	6.9	7.0	6.9	19.0	6.1	7.1	17.6	6.2	18.3	6.0	13.1	14.5	6.6	4.4	9.8
1987	6.1	6.2	6.2	17.8	5.4	6.2	15.9	5.4	16.9	5.3	11.6	13.0	5.8	3.9	9.2
1988	5.4	5.5	5.5	16.0	4.8	5.6	14.4	4.9	15.3	4.7	10.4	11.7	5.2	3.3	8.1
1989	5.2	5.3	5.2	15.9	4.5	5.4	14.0	4.7	15.0	4.5	10.0	11.4	5.0	3.0	8.1
1990	5.4	5.5	5.6	16.3	4.9	5.4	14.7	4.8	15.5	4.7	10.1	11.3	5.3	3.4	8.2
1989: Jan	5.3	5.4	5.4	18.5	4.6	5.4	13.9	4.7	16.3	4.6	10.4	11.8	5.1	3.1	8.1
Feb	5.1	5.2	5.2	16.7	4.5	5.1	13.0	4.5	14.9	4.3	10.4	11.8	4.9	3.1	8.1
Mar	5.0	5.1	4.9	15.0	4.3	5.2	13.3	4.7	14.2	4.3	9.9	11.1	4.8	2.9	7.9
Apr	5.2	5.2	5.2	15.7	4.5	5.3	13.5	4.7	14.6	4.4	9.8	11.2	5.0	3.1	8.0
May	5.1	5.2	5.0	16.3	4.3	5.4	13.5	4.8	14.9	4.4	9.8	11.3	5.0	2.9	8.3
June	5.3	5.4	5.1	16.2	4.4	5.7	15.6	4.9	15.9	4.5	10.4	12.0	5.1	2.9	8.0
July	5.2	5.3	5.0	14.0	4.4	5.7	15.4	4.9	14.7	4.6	9.7	11.0	5.1	3.0	8.3
Aug	5.2	5.2	5.1	14.9	4.5	5.4	14.2	4.7	14.6	4.5	9.6	11.1	5.0	3.1	8.0
Sept	5.2	5.3	5.4	15.6	4.7	5.2	14.5	4.5	15.1	4.5	10.1	11.5	5.0	3.3	7.5
Oct	5.2	5.3	5.2	15.9	4.6	5.4	13.6	4.8	14.8	4.5	10.2	11.5	5.0	3.0	7.7
Nov	5.2	5.3	5.3	16.5	4.6	5.3	13.7	4.7	15.2	4.5	10.1	11.7	5.1	3.0	8.2
Dec	5.2	5.3	5.2	15.9	4.5	5.4	14.2	4.7	15.1	4.5	10.0	11.4	5.0	3.1	7.9
1990: Jan	5.2	5.3	5.3	15.4	4.6	5.2	13.8	4.6	14.6	4.5	10.0	11.4	5.0	3.4	7.6
Feb	5.2	5.3	5.2	15.2	4.6	5.3	14.5	4.7	14.8	4.6	9.4	10.7	5.0	3.1	7.6
Mar	5.2	5.3	5.2	15.2	4.6	5.3	14.0	4.7	14.6	4.6	9.5	10.7	5.1	3.2	8.3
Apr	5.3	5.4	5.4	15.6	4.7	5.4	14.0	4.8	14.8	4.7	9.3	10.6	5.1	3.2	7.8
May	5.3	5.3	5.4	16.0	4.7	5.3	14.7	4.6	15.4	4.6	9.5	10.6	5.1	3.3	7.5
June	5.2	5.3	5.3	15.7	4.7	5.1	13.6	4.6	14.7	4.5	9.6	10.7	5.1	3.2	8.0
July	5.4	5.5	5.6	16.8	4.9	5.4	14.7	4.7	15.8	4.7	10.3	11.4	5.2	3.3	8.3
Aug	5.6	5.6	5.7	17.6	5.0	5.5	15.4	4.9	16.6	4.8	10.4	11.7	5.3	3.5	8.4
Sept	5.6	5.7	5.8	16.8	5.1	5.5	14.4	4.9	15.7	4.8	10.8	11.9	5.4	3.5	8.7
Oct	5.6	5.7	5.8	16.7	5.2	5.6	15.6	4.9	16.2	4.9	10.6	11.7	5.4	3.5	8.5
Nov	5.8	5.9	6.0	17.1	5.4	5.7	15.6	5.1	16.4	5.0	11.0	12.2	5.7	3.7	8.7
Dec	6.0	6.1	6.2	17.4	5.6	5.9	15.6	5.3	16.6	5.3	11.1	12.2	5.8	3.8	8.7

[1] Unemployed as percent of labor force including resident Armed Forces.
[2] Unemployed as percent of civilian labor force in group specified.
[3] Data for 1949 and 1951–54 are for April; 1950, for March.

Note.—Data relate to persons 16 years of age and over.
See footnote 6 and Note, Table B–32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-40.—*Civilian unemployment rate by demographic characteristic, 1948–90*

[Percent;[1] monthly data seasonally adjusted]

Year or month	All civilian workers	White							Black and other or black						
		Total	Males			Females			Total	Males			Females		
			Total	16–19 years	20 years and over	Total	16–19 years	20 years and over		Total	16–19 years	20 years and over	Total	16–19 years	20 years and over
									Black and other						
1948	3.8	3.5	3.4	......	......	3.8	......	......	5.9	5.8	......	......	6.1	......	......
1949	5.9	5.6	5.6	......	......	5.7	......	......	8.9	9.6	......	......	7.9	......	......
1950	5.3	4.9	4.7	......	......	5.3	......	......	9.0	9.4	......	......	8.4	......	......
1951	3.3	3.1	2.6	......	......	4.2	......	......	5.3	4.9	......	......	6.1	......	......
1952	3.0	2.8	2.5	......	......	3.3	......	......	5.4	5.2	......	......	5.7	......	......
1953	2.9	2.7	2.5	......	......	3.1	......	......	4.5	4.8	......	......	4.1	......	......
1954	5.5	5.0	4.8	13.4	4.4	5.5	10.4	5.1	9.9	10.3	14.4	9.9	9.2	20.6	8.4
1955	4.4	3.9	3.7	11.3	3.3	4.3	9.1	3.9	8.7	8.8	13.4	8.4	8.5	19.2	7.7
1956	4.1	3.6	3.4	10.5	3.0	4.2	9.7	3.7	8.3	7.9	15.0	7.4	8.9	22.8	7.8
1957	4.3	3.8	3.6	11.5	3.2	4.3	9.5	3.8	7.9	8.3	18.4	7.6	7.3	20.2	6.4
1958	6.8	6.1	6.1	15.7	5.5	6.2	12.7	5.6	12.6	13.7	26.8	12.7	10.8	28.4	9.5
1959	5.5	4.8	4.6	14.0	4.1	5.3	12.0	4.7	10.7	11.5	25.2	10.5	9.4	27.7	8.3
1960	5.5	5.0	4.8	14.0	4.2	5.3	12.7	4.6	10.2	10.7	24.0	9.6	9.4	24.8	8.3
1961	6.7	6.0	5.7	15.7	5.1	6.5	14.8	5.7	12.4	12.8	26.8	11.7	11.9	29.2	10.6
1962	5.5	4.9	4.6	13.7	4.0	5.5	12.8	4.7	10.9	10.9	22.0	10.0	11.0	30.2	9.6
1963	5.7	5.0	4.7	15.9	3.9	5.8	15.1	4.8	10.8	10.5	27.3	9.2	11.2	34.7	9.4
1964	5.2	4.6	4.1	14.7	3.4	5.5	14.9	4.6	9.6	8.9	24.3	7.7	10.7	31.6	9.0
1965	4.5	4.1	3.6	12.9	2.9	5.0	14.0	4.0	8.1	7.4	23.3	6.0	9.2	31.7	7.5
1966	3.8	3.4	2.8	10.5	2.2	4.3	12.1	3.3	7.3	6.3	21.3	4.9	8.7	31.3	6.6
1967	3.8	3.4	2.7	10.7	2.1	4.6	11.5	3.8	7.4	6.0	23.9	4.3	9.1	29.6	7.1
1968	3.6	3.2	2.6	10.1	2.0	4.3	12.1	3.4	6.7	5.6	22.1	3.9	8.3	28.7	6.3
1969	3.5	3.1	2.5	10.0	1.9	4.2	11.5	3.4	6.4	5.3	21.4	3.7	7.8	27.6	5.8
1970	4.9	4.5	4.0	13.7	3.2	5.4	13.4	4.4	8.2	7.3	25.0	5.6	9.3	34.5	6.9
1971	5.9	5.4	4.9	15.1	4.0	6.3	15.1	5.3	9.9	9.1	28.8	7.3	10.9	35.4	8.7
1972	5.6	5.1	4.5	14.2	3.6	5.9	14.2	4.9	10.0	8.9	29.7	6.9	11.4	38.4	8.8
									Black						
1972	5.6	5.1	4.5	14.2	3.6	5.9	14.2	4.9	10.4	9.3	31.7	7.0	11.8	40.5	9.0
1973	4.9	4.3	3.8	12.3	3.0	5.3	13.0	4.3	9.4	8.0	27.8	6.0	11.1	36.1	8.6
1974	5.6	5.0	4.4	13.5	3.5	6.1	14.5	5.1	10.5	9.8	33.1	7.4	11.3	37.4	8.8
1975	8.5	7.8	7.2	18.3	6.2	8.6	17.4	7.5	14.8	14.8	38.1	12.5	14.8	41.0	12.2
1976	7.7	7.0	6.4	17.3	5.4	7.9	16.4	6.8	14.0	13.7	37.5	11.4	14.3	41.6	11.7
1977	7.1	6.2	5.5	15.0	4.7	7.3	15.9	6.2	14.0	13.3	39.2	10.7	14.9	43.4	12.3
1978	6.1	5.2	4.6	13.5	3.7	6.2	14.4	5.2	12.8	11.8	36.7	9.3	13.8	40.8	11.2
1979	5.8	5.1	4.5	13.9	3.6	5.9	14.0	5.0	12.3	11.4	34.2	9.3	13.3	39.1	10.9
1980	7.1	6.3	6.1	16.2	5.3	6.5	14.8	5.6	14.3	14.5	37.5	12.4	14.0	39.8	11.9
1981	7.6	6.7	6.5	17.9	5.6	6.9	16.6	5.9	15.6	15.7	40.7	13.5	15.6	42.2	13.4
1982	9.7	8.6	8.8	21.7	7.8	8.3	19.0	7.3	18.9	20.1	48.9	17.8	17.6	47.1	15.4
1983	9.6	8.4	8.8	20.2	7.9	7.9	18.3	6.9	19.5	20.3	48.8	18.1	18.6	48.2	16.5
1984	7.5	6.5	6.4	16.8	5.7	6.5	15.2	5.8	15.9	16.4	42.7	14.3	15.4	42.6	13.5
1985	7.2	6.2	6.1	16.5	5.4	6.4	14.8	5.7	15.1	15.3	41.0	13.2	14.9	39.2	13.1
1986	7.0	6.0	6.0	16.3	5.3	6.1	14.9	5.4	14.5	14.8	39.3	12.9	14.2	39.2	12.4
1987	6.2	5.3	5.4	15.5	4.8	5.2	13.4	4.6	13.0	12.7	34.4	11.1	13.2	34.9	11.6
1988	5.5	4.7	4.7	13.9	4.1	4.7	12.3	4.1	11.7	11.7	32.7	10.1	11.7	32.0	10.4
1989	5.3	4.5	4.5	13.7	3.9	4.5	11.5	4.0	11.4	11.5	31.9	10.0	11.4	33.0	9.8
1990	5.5	4.7	4.8	14.2	4.3	4.6	12.6	4.1	11.3	11.8	32.1	10.4	10.8	30.0	9.6
1989: Jan	5.4	4.6	4.7	16.2	4.0	4.5	11.6	4.0	11.8	11.8	35.6	10.1	11.8	33.4	10.3
Feb	5.2	4.3	4.4	14.1	3.8	4.1	10.5	3.7	11.8	12.1	32.9	10.4	11.4	32.3	10.0
Mar	5.1	4.3	4.2	13.2	3.7	4.4	10.6	3.9	11.1	11.2	29.2	9.8	11.0	35.4	9.4
Apr	5.2	4.4	4.4	13.2	3.8	4.5	11.4	4.0	11.2	11.9	36.4	10.1	10.5	30.0	9.1
May	5.2	4.4	4.3	14.1	3.6	4.6	11.2	4.1	11.3	11.6	35.8	9.9	11.0	29.8	9.6
June	5.4	4.5	4.4	13.9	3.8	4.7	12.5	4.1	12.0	11.6	32.5	9.8	12.4	38.4	10.7
July	5.3	4.6	4.4	12.7	3.8	4.8	12.8	4.2	11.0	10.5	23.4	9.5	11.5	32.9	10.0
Aug	5.2	4.5	4.4	12.9	3.8	4.6	12.1	4.1	11.1	11.3	29.2	9.9	10.8	31.1	9.5
Sept	5.3	4.5	4.7	13.1	4.2	4.3	11.1	3.8	11.5	11.4	34.7	9.8	11.6	39.0	9.5
Oct	5.3	4.5	4.5	13.7	3.9	4.5	11.0	4.0	11.5	11.6	32.3	10.0	11.5	33.5	9.9
Nov	5.3	4.5	4.6	14.0	4.0	4.5	11.6	4.0	11.7	11.8	32.0	10.2	11.6	31.2	10.2
Dec	5.3	4.5	4.5	13.9	3.9	4.6	12.1	4.0	11.4	11.9	29.2	10.5	11.0	29.5	9.6
1990: Jan	5.3	4.5	4.5	13.2	4.0	4.5	12.3	4.0	11.4	12.4	29.1	11.0	10.4	25.7	9.4
Feb	5.3	4.6	4.6	13.1	4.1	4.6	12.9	4.1	10.7	10.9	29.2	9.5	10.5	28.5	9.4
Mar	5.3	4.6	4.6	13.3	4.0	4.6	12.6	4.0	10.7	11.1	30.5	9.7	10.3	27.3	9.2
Apr	5.4	4.7	4.7	13.8	4.2	4.6	12.3	4.1	10.6	11.0	28.9	9.7	10.2	26.4	9.2
May	5.3	4.6	4.6	14.1	4.1	4.5	12.9	4.0	10.6	10.9	31.6	9.5	10.3	28.1	9.2
June	5.3	4.5	4.6	13.4	4.1	4.4	11.6	4.0	10.7	11.3	35.2	9.7	10.2	27.1	9.1
July	5.5	4.7	4.8	14.9	4.2	4.5	12.4	4.0	11.4	12.1	33.1	10.7	10.7	31.1	9.4
Aug	5.6	4.8	4.9	15.4	4.4	4.7	13.1	4.1	11.7	12.2	36.7	10.6	11.1	32.7	9.8
Sept	5.7	4.8	4.9	15.0	4.4	4.7	12.6	4.2	11.9	12.7	31.4	11.5	11.1	27.6	10.2
Oct	5.7	4.9	5.0	14.7	4.5	4.7	13.0	4.2	11.7	12.4	31.3	11.1	11.1	32.7	9.7
Nov	5.9	5.0	5.2	14.9	4.6	4.8	12.5	4.3	12.2	12.6	33.2	11.2	11.8	37.5	10.2
Dec	6.1	5.3	5.5	14.9	5.0	5.0	13.0	4.4	12.2	12.5	36.4	10.9	12.0	35.6	10.6

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[1] Unemployed as percent of civilian labor force in group specified.

Note.—See Note, Table B–39.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–41.—*Unemployment by duration and reason, 1947–90*

[Thousands of persons, except as noted; monthly data seasonally adjusted[1]]

Year or month	Unemployment	Duration of unemployment						Reason for unemployment			
		Less than 5 weeks	5–14 weeks	15–26 weeks	27 weeks and over	Average (mean) duration (weeks)	Median duration (weeks)	Job losers	Job leavers	Reentrants	New entrants
1947	2,311	1,210	704	234	164	......	......	......	......	......	......
1948	2,276	1,300	669	193	116	8.6	......	......	......	......	......
1949	3,637	1,756	1,194	428	256	10.0	......	......	......	......	......
1950	3,288	1,450	1,055	425	357	12.1	......	......	......	......	......
1951	2,055	1,177	574	166	137	9.7	......	......	......	......	......
1952	1,883	1,135	516	148	84	8.4	......	......	......	......	......
1953	1,834	1,142	482	132	78	8.0	......	......	......	......	......
1954	3,532	1,605	1,116	495	317	11.8	......	......	......	......	......
1955	2,852	1,335	815	366	336	13.0	......	......	......	......	......
1956	2,750	1,412	805	301	232	11.3	......	......	......	......	......
1957	2,859	1,408	891	321	239	10.5	......	......	......	......	......
1958	4,602	1,753	1,396	785	667	13.9	......	......	......	......	......
1959	3,740	1,585	1,114	469	571	14.4	......	......	......	......	......
1960	3,852	1,719	1,176	503	454	12.8	......	......	......	......	......
1961	4,714	1,806	1,376	728	804	15.6	......	......	......	......	......
1962	3,911	1,663	1,134	534	585	14.7	......	......	......	......	......
1963	4,070	1,751	1,231	535	553	14.0	......	......	......	......	......
1964	3,786	1,697	1,117	491	482	13.3	......	......	......	......	......
1965	3,366	1,628	983	404	351	11.8	......	......	......	......	......
1966	2,875	1,573	779	287	239	10.4	......	......	......	......	......
1967[2]	2,975	1,634	893	271	177	8.7	......	1,229	438	945	396
1968	2,817	1,594	810	256	156	8.4	4.5	1,070	431	909	407
1969	2,832	1,629	827	242	133	7.8	4.4	1,017	436	965	413
1970	4,093	2,139	1,290	428	235	8.6	4.9	1,811	550	1,228	504
1971	5,016	2,245	1,585	668	519	11.3	6.3	2,323	590	1,472	630
1972	4,882	2,242	1,472	601	566	12.0	6.2	2,108	641	1,456	677
1973	4,365	2,224	1,314	483	343	10.0	5.2	1,694	683	1,340	649
1974	5,156	2,604	1,597	574	381	9.8	5.2	2,242	768	1,463	681
1975	7,929	2,940	2,484	1,303	1,203	14.2	8.4	4,386	827	1,892	823
1976	7,406	2,844	2,196	1,018	1,348	15.8	8.2	3,679	903	1,928	895
1977	6,991	2,919	2,132	913	1,028	14.3	7.0	3,166	909	1,963	953
1978	6,202	2,865	1,923	766	648	11.9	5.9	2,585	874	1,857	885
1979	6,137	2,950	1,946	706	535	10.8	5.4	2,635	880	1,806	817
1980	7,637	3,295	2,470	1,052	820	11.9	6.5	3,947	891	1,927	872
1981	8,273	3,449	2,539	1,122	1,162	13.7	6.9	4,267	923	2,102	981
1982	10,678	3,883	3,311	1,708	1,776	15.6	8.7	6,268	840	2,384	1,185
1983	10,717	3,570	2,937	1,652	2,559	20.0	10.1	6,258	830	2,412	1,216
1984	8,539	3,350	2,451	1,104	1,634	18.2	7.9	4,421	823	2,184	1,110
1985	8,312	3,498	2,509	1,025	1,280	15.6	6.8	4,139	877	2,256	1,039
1986	8,237	3,448	2,557	1,045	1,187	15.0	6.9	4,033	1,015	2,160	1,029
1987	7,425	3,246	2,196	943	1,040	14.5	6.5	3,566	965	1,974	920
1988	6,701	3,084	2,007	801	809	13.5	5.9	3,092	983	1,809	816
1989	6,528	3,174	1,978	730	646	11.9	4.8	2,983	1,024	1,843	677
1990	6,874	3,169	2,201	809	695	12.1	5.4	3,322	1,014	1,883	654
1989: Jan	6,643	3,151	1,998	742	729	12.5	5.6	3,038	969	1,864	774
Feb	6,347	3,213	1,887	664	638	12.3	5.3	2,874	984	1,770	752
Mar	6,252	3,060	1,869	696	669	12.3	5.5	2,876	906	1,766	718
Apr	6,465	3,075	1,990	705	715	12.6	5.5	2,930	973	1,896	710
May	6,419	3,110	1,961	720	633	11.9	5.3	2,797	1,110	1,859	691
June	6,662	3,331	2,038	694	623	11.2	5.5	2,854	1,024	2,047	738
July	6,580	3,181	1,974	824	627	11.9	5.5	2,954	1,011	1,869	713
Aug	6,504	3,075	2,024	738	570	11.4	5.0	2,984	1,033	1,753	637
Sept	6,579	3,198	2,023	755	590	11.5	5.0	2,935	1,047	1,891	652
Oct	6,587	3,187	1,993	730	647	11.8	4.9	3,000	999	1,883	673
Nov	6,628	3,208	2,022	745	641	11.6	4.8	3,053	1,044	1,842	691
Dec	6,585	3,219	1,961	721	627	11.5	4.9	3,063	1,036	1,824	680
1990: Jan	6,544	3,131	2,010	754	642	11.9	5.0	3,116	1,015	1,775	647
Feb	6,579	3,157	2,070	737	637	11.7	5.2	3,095	1,012	1,815	672
Mar	6,563	3,183	2,074	732	638	11.9	5.0	3,073	1,019	1,850	651
Apr	6,691	3,185	2,146	742	675	12.1	5.0	3,145	1,159	1,794	637
May	6,662	3,078	2,194	776	628	11.6	5.3	3,173	1,017	1,828	677
June	6,560	3,100	2,085	777	659	12.0	5.2	3,203	999	1,839	549
July	6,827	3,142	2,166	807	701	12.1	5.2	3,145	1,020	1,920	677
Aug	7,015	3,275	2,077	822	746	12.3	5.3	3,388	989	1,872	669
Sept	7,087	3,087	2,452	861	744	12.4	6.1	3,519	954	1,952	663
Oct	7,142	3,139	2,391	893	698	12.0	5.9	3,563	981	1,911	684
Nov	7,337	3,277	2,334	938	789	12.4	5.9	3,756	996	1,926	655
Dec	7,600	3,280	2,518	940	799	12.4	5.9	3,797	1,024	2,128	662

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[1] Because of independent seasonal adjustment of the various series, detail will not add to totals.

[2] Data for 1967 by reason for unemployment are not strictly comparable with those for later years and the total by reason is not equal to total unemployment.

Note.—Data relate to persons 16 years of age and over.

See footnote 6 and Note, Table B–32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–42.—*Unemployment insurance programs, selected data, 1955–90*

Year or month	All programs			State programs					
								Benefits paid	
	Covered employment [1]	Insured unemployment (weekly average) [2] [3]	Total benefits paid (millions of dollars) [2] [4]	Insured unemployment	Initial claims	Exhaustions [5]	Insured unemployment as percent of covered employment	Total (millions of dollars) [4]	Average weekly check (dollars) [6]
	Thousands			Weekly average; thousands					
1955	40,018	1,399	1,560.2	1,265	226	25	3.5	1,350.3	25.04
1956	42,751	1,323	1,540.6	1,215	227	20	3.2	1,380.7	27.02
1957	43,436	1,571	1,913.0	1,446	270	23	3.6	1,733.9	28.17
1958	44,411	2,773	4,290.6	2,510	369	50	6.4	3,512.7	30.58
1959	45,728	1,860	2,854.3	1,684	277	33	4.4	2,279.0	30.41
1960	46,334	2,071	3,022.8	1,908	331	31	4.8	2,726.7	32.87
1961	46,266	2,994	4,358.1	2,290	350	46	5.6	3,422.7	33.80
1962	47,776	1,946	3,145.1	1,783	302	32	4.4	2,675.4	34.56
1963	48,434	[7] 1,973	3,025.9	[7] 1,806	[7] 298	30	4.3	2,774.7	35.27
1964	49,637	1,753	2,749.2	1,605	268	26	3.8	2,522.1	35.92
1965	51,580	1,450	2,360.4	1,328	232	21	3.0	2,166.0	37.19
1966	54,739	1,129	1,890.9	1,061	203	15	2.3	1,771.3	39.75
1967	56,342	1,270	2,221.5	1,205	226	17	2.5	2,092.3	41.25
1968	57,977	1,187	2,191.0	1,111	201	16	2.2	2,031.6	43.43
1969	59,999	1,177	2,298.6	1,101	200	16	2.1	2,127.9	46.17
1970	59,526	2,070	4,209.3	1,805	296	25	3.4	3,848.5	50.34
1971	59,375	2,608	6,154.0	2,150	295	39	4.1	4,957.0	54.02
1972	66,458	2,192	5,491.1	1,848	261	35	3.5	4,471.0	56.76
1973	69,897	1,793	4,517.3	1,632	247	29	2.7	4,007.6	59.00
1974	72,451	2,558	6,933.9	2,262	363	37	3.5	5,974.9	64.25
1975	71,037	4,937	16,802.4	3,986	478	81	6.0	11,754.7	70.23
1976	73,459	3,846	12,344.8	2,991	386	63	4.6	8,974.5	75.16
1977	76,419	3,308	10,998.9	2,655	375	55	3.9	8,357.2	78.79
1978	88,804	2,645	9,006.9	2,359	346	39	3.3	7,717.2	83.67
1979	92,062	2,592	9,401.3	2,434	388	39	2.9	8,612.9	89.67
1980	92,659	3,837	16,175.4	3,350	488	59	3.9	13,761.1	98.95
1981	93,300	3,410	15,287.1	3,047	460	57	3.5	13,262.1	106.70
1982	91,628	4,594	23,774.8	4,061	583	80	4.6	20,649.5	119.37
1983	91,898	3,775	20,206.2	3,396	438	80	3.9	17,762.8	123.59
1984	96,474	2,561	13,109.6	2,476	377	50	2.8	12,594.7	123.47
1985	99,186	2,693	15,056.3	2,611	396	50	2.9	14,130.8	128.23
1986	101,099	2,746	16,292.5	2,650	378	52	2.8	15,329.3	135.72
1987	98,757	2,401	14,501.0	2,332	328	46	2.4	13,606.8	139.90
1988	101,987	2,248	13,280.0	2,081	310	38	2.1	12,564.7	144.97
1989	[8] 103,537	2,324	14,498.4	2,158	330	37	2.1	13,752.3	151.63
1990 [p]	....	2,715	....	2,514	387	44	....	....	161.13
				**	**		**		
1989: Jan	....	2,684	1,450.5	2,071	293	38	2.1	1,413.2	148.39
Feb	....	2,695	1,370.9	2,091	305	38	2.1	1,336.2	150.37
Mar	....	2,571	1,563.1	2,120	318	38	2.1	1,522.1	150.92
Apr	....	2,225	1,190.0	2,106	308	42	2.1	1,162.4	150.21
May	....	1,958	1,165.1	2,068	316	38	2.0	1,137.6	151.28
June	....	1,935	1,102.1	2,133	331	37	2.1	1,076.2	151.27
July	....	2,169	1,086.8	2,194	334	38	2.2	1,061.9	150.68
Aug	....	2,009	1,228.4	2,169	323	38	2.1	1,198.2	150.50
Sept	....	1,862	983.3	2,208	331	35	2.2	957.8	152.51
Oct	....	1,910	1,071.9	2,295	366	34	2.2	1,044.8	155.90
Nov	....	2,141	1,174.2	2,305	348	36	2.2	1,144.1	154.71
Dec	....	2,509	1,278.1	2,373	367	37	2.3	1,248.3	155.78
1990: Jan	....	3,064	1,883.2	2,367	359	44	2.3	1,843.6	158.53
Feb	....	2,998	1,673.1	2,334	357	42	2.3	1,636.7	160.44
Mar	....	2,846	1,755.1	2,349	347	43	2.3	1,716.1	159.60
Apr	....	2,531	1,536.3	2,381	360	47	2.3	1,502.5	162.02
May	....	2,270	1,498.7	2,400	351	45	2.3	1,466.7	162.02
June	....	2,212	1,293.5	2,442	357	44	2.3	1,265.4	161.91
July	....	2,442	1,426.5	2,470	354	47	2.4	1,397.3	159.93
Aug	....	2,295	1,463.8	2,492	371	44	2.4	1,431.5	160.53
Sept	....	2,193	1,207.6	2,602	393	42	2.5	1,178.4	162.23
Oct	....	2,294	1,439.9	2,748	431	43	2.6	1,402.4	164.01
Nov	....	2,722	1,440.8	2,908	460	42	2.8	1,482.5	160.84
Dec [p]	....	....	1,607.0	3,002	467	45	2.9	1,567.5	162.88

**Monthly data are seasonally adjusted.

[1] Includes persons under the State, UCFE (Federal employee, effective January 1955), and RRB (Railroad Retirement Board) programs. Beginning October 1958, also includes the UCX program (unemployment compensation for ex-servicemen).

[2] Includes State, UCFE, RR, UCX, UCV (unemployment compensation for veterans, October 1952–January 1960), and SRA (Servicemen's Readjustment Act, September 1944–September 1951) programs. Also includes Federal and State extended benefit programs. Does not include FSB (Federal supplemental benefits), SUA (special unemployment assistance), and Federal Supplemental Compensation programs.

[3] Covered workers who have completed at least 1 week of unemployment.

[4] Annual data are net amounts and monthly data are gross amounts.

[5] Individuals receiving final payments in benefit year.

[6] For total unemployment only.

[7] Programs include Puerto Rican sugarcane workers for initial claims and insured unemployment beginning July 1963.

[8] Latest data available for all programs combined. Workers covered by State programs account for about 97 percent of wage and salary earners.

Source: Department of Labor, Employment and Training Administration.

TABLE B–43.—*Employees on nonagricultural payrolls, by major industry, 1946–90*

[Thousands of persons; monthly data seasonally adjusted]

Year or month	Total	Goods-producing industries					
		Total	Mining	Construction	Manufacturing		
					Total	Durable goods	Nondurable goods
1946	41,652	17,248	862	1,683	14,703	7,785	6,918
1947	43,857	18,509	955	2,009	15,545	8,358	7,187
1948	44,866	18,774	994	2,198	15,582	8,298	7,285
1949	43,754	17,565	930	2,194	14,441	7,462	6,979
1950	45,197	18,506	901	2,364	15,241	8,066	7,175
1951	47,819	19,959	929	2,637	16,393	9,059	7,334
1952	48,793	20,198	898	2,668	16,632	9,320	7,313
1953	50,202	21,074	866	2,659	17,549	10,080	7,468
1954	48,990	19,751	791	2,646	16,314	9,101	7,213
1955	50,641	20,513	792	2,839	16,882	9,511	7,370
1956	52,369	21,104	822	3,039	17,243	9,802	7,442
1957	52,853	20,964	828	2,962	17,174	9,825	7,351
1958	51,324	19,513	751	2,817	15,945	8,801	7,144
1959	53,268	20,411	732	3,004	16,675	9,342	7,333
1960	54,189	20,434	712	2,926	16,796	9,429	7,367
1961	53,999	19,857	672	2,859	16,326	9,041	7,285
1962	55,549	20,451	650	2,948	16,853	9,450	7,403
1963	56,653	20,640	635	3,010	16,995	9,586	7,410
1964	58,283	21,005	634	3,097	17,274	9,785	7,489
1965	60,765	21,926	632	3,232	18,062	10,374	7,688
1966	63,901	23,158	627	3,317	19,214	11,250	7,963
1967	65,803	23,308	613	3,248	19,447	11,408	8,039
1968	67,897	23,737	606	3,350	19,781	11,594	8,187
1969	70,384	24,361	619	3,575	20,167	11,862	8,304
1970	70,880	23,578	623	3,588	19,367	11,176	8,190
1971	71,214	22,935	609	3,704	18,623	10,604	8,019
1972	73,675	23,668	628	3,889	19,151	11,022	8,129
1973	76,790	24,893	642	4,097	20,154	11,863	8,291
1974	78,265	24,794	697	4,020	20,077	11,897	8,181
1975	76,945	22,600	752	3,525	18,323	10,662	7,661
1976	79,382	23,352	779	3,576	18,997	11,051	7,946
1977	82,471	24,346	813	3,851	19,682	11,570	8,112
1978	86,697	25,585	851	4,229	20,505	12,245	8,259
1979	89,823	26,461	958	4,463	21,040	12,730	8,310
1980	90,406	25,658	1,027	4,346	20,285	12,159	8,127
1981	91,156	25,497	1,139	4,188	20,170	12,082	8,089
1982	89,566	23,813	1,128	3,905	18,781	11,014	7,767
1983	90,200	23,334	952	3,948	18,434	10,707	7,726
1984	94,496	24,727	966	4,383	19,378	11,479	7,899
1985	97,519	24,859	927	4,673	19,260	11,464	7,796
1986	99,525	24,558	777	4,816	18,965	11,203	7,761
1987	102,200	24,708	717	4,967	19,024	11,167	7,858
1988	105,536	25,173	713	5,110	19,350	11,381	7,969
1989	108,413	25,326	700	5,200	19,426	11,422	8,004
1990 [p]	110,323	25,002	735	5,204	19,063	11,122	7,941
1989: Jan	107,430	25,399	692	5,170	19,537	11,533	8,004
Feb	107,648	25,357	688	5,166	19,503	11,497	8,006
Mar	107,811	25,331	691	5,137	19,503	11,487	8,016
Apr	107,988	25,361	695	5,177	19,489	11,481	8,008
May	108,135	25,363	697	5,187	19,479	11,471	8,008
June	108,364	25,335	692	5,190	19,453	11,444	8,009
July	108,490	25,328	682	5,207	19,439	11,427	8,012
Aug	108,628	25,356	706	5,220	19,430	11,416	8,014
Sept	108,868	25,304	709	5,225	19,370	11,369	8,001
Oct	108,980	25,283	710	5,239	19,334	11,337	7,997
Nov	109,245	25,280	716	5,258	19,306	11,314	7,992
Dec	109,383	25,218	718	5,216	19,284	11,296	7,988
1990: Jan	109,654	25,188	723	5,294	19,171	11,192	7,979
Feb	109,958	25,339	727	5,368	19,244	11,278	7,966
Mar	110,122	25,259	729	5,313	19,217	11,261	7,956
Apr	110,177	25,180	734	5,256	19,190	11,229	7,961
May	110,617	25,191	738	5,286	19,167	11,217	7,950
June	110,829	25,162	744	5,270	19,148	11,201	7,947
July	110,740	25,105	745	5,229	19,131	11,179	7,952
Aug	110,613	25,013	735	5,194	19,084	11,129	7,955
Sept	110,612	24,931	736	5,176	19,019	11,068	7,951
Oct	110,432	24,777	733	5,093	18,951	11,026	7,925
Nov	110,165	24,511	738	5,029	18,744	10,865	7,879
Dec [p]	110,017	24,426	740	4,987	18,699	10,832	7,867

See next page for continuation of table.

TABLE B–43.—*Employees on nonagricultural payrolls, by major industry, 1946–90*—Continued

[Thousands of persons; monthly data seasonally adjusted]

Year or month	Service-producing industries								
	Total	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services	Government		
							Total	Federal	State and local
1946	24,404	4,061	2,298	6,077	1,675	4,697	5,595	2,254	3,341
1947	25,348	4,166	2,478	6,477	1,728	5,025	5,474	1,892	3,582
1948	26,092	4,189	2,612	6,659	1,800	5,181	5,650	1,863	3,787
1949	26,189	4,001	2,610	6,654	1,828	5,239	5,856	1,908	3,948
1950	26,691	4,034	2,643	6,743	1,888	5,356	6,026	1,928	4,098
1951	27,860	4,226	2,735	7,007	1,956	5,547	6,389	2,302	4,087
1952	28,595	4,248	2,821	7,184	2,035	5,699	6,609	2,420	4,188
1953	29,128	4,290	2,862	7,385	2,111	5,835	6,645	2,305	4,340
1954	29,239	4,084	2,875	7,360	2,200	5,969	6,751	2,188	4,563
1955	30,128	4,141	2,934	7,601	2,298	6,240	6,914	2,187	4,727
1956	31,266	4,244	3,027	7,831	2,389	6,497	7,278	2,209	5,069
1957	31,889	4,241	3,037	7,848	2,438	6,708	7,616	2,217	5,399
1958	31,811	3,976	2,989	7,761	2,481	6,765	7,839	2,191	5,648
1959	32,857	4,011	3,092	8,035	2,549	7,087	8,083	2,233	5,850
1960	33,755	4,004	3,153	8,238	2,628	7,378	8,353	2,270	6,083
1961	34,142	3,903	3,142	8,195	2,688	7,619	8,594	2,279	6,315
1962	35,098	3,906	3,207	8,359	2,754	7,982	8,890	2,340	6,550
1963	36,013	3,903	3,258	8,520	2,830	8,277	9,225	2,358	6,868
1964	37,278	3,951	3,347	8,812	2,911	8,660	9,596	2,348	7,248
1965	38,839	4,036	3,477	9,239	2,977	9,036	10,074	2,378	7,696
1966	40,743	4,158	3,608	9,637	3,058	9,498	10,784	2,564	8,220
1967	42,495	4,268	3,700	9,906	3,185	10,045	11,391	2,719	8,672
1968	44,160	4,318	3,791	10,308	3,337	10,567	11,839	2,737	9,102
1969	46,023	4,442	3,919	10,785	3,512	11,169	12,195	2,758	9,437
1970	47,302	4,515	4,006	11,034	3,645	11,548	12,554	2,731	9,823
1971	48,278	4,476	4,014	11,338	3,772	11,797	12,881	2,696	10,185
1972	50,007	4,541	4,127	11,822	3,908	12,276	13,334	2,684	10,649
1973	51,897	4,656	4,291	12,315	4,046	12,857	13,732	2,663	11,068
1974	53,471	4,725	4,447	12,539	4,148	13,441	14,170	2,724	11,446
1975	54,345	4,542	4,430	12,630	4,165	13,892	14,686	2,748	11,937
1976	56,030	4,582	4,562	13,193	4,271	14,551	14,871	2,733	12,138
1977	58,125	4,713	4,723	13,792	4,467	15,302	15,127	2,727	12,399
1978	61,113	4,923	4,985	14,556	4,724	16,252	15,672	2,753	12,919
1979	63,363	5,136	5,221	14,972	4,975	17,112	15,947	2,773	13,174
1980	64,748	5,146	5,292	15,018	5,160	17,890	16,241	2,866	13,375
1981	65,659	5,165	5,376	15,172	5,298	18,619	16,031	2,772	13,259
1982	65,753	5,082	5,296	15,161	5,341	19,036	15,837	2,739	13,098
1983	66,866	4,954	5,286	15,595	5,468	19,694	15,869	2,774	13,096
1984	69,769	5,159	5,574	16,526	5,689	20,797	16,024	2,807	13,216
1985	72,660	5,238	5,736	17,336	5,955	21,999	16,394	2,875	13,519
1986	74,967	5,255	5,774	17,909	6,283	23,053	16,693	2,899	13,794
1987	77,492	5,372	5,865	18,462	6,547	24,235	17,010	2,943	14,067
1988	80,363	5,527	6,055	19,077	6,649	25,669	17,386	2,971	14,415
1989	83,087	5,648	6,271	19,580	6,724	27,096	17,769	2,988	14,781
1990 [p]	85,320	5,839	6,361	19,789	6,832	28,208	18,291	3,086	15,206
1989: Jan	82,031	5,605	6,184	19,447	6,673	26,533	17,589	2,980	14,609
Feb	82,291	5,620	6,211	19,476	6,684	26,669	17,631	2,983	14,648
Mar	82,480	5,604	6,231	19,519	6,686	26,790	17,650	2,987	14,663
Apr	82,627	5,621	6,242	19,506	6,691	26,893	17,674	2,983	14,691
May	82,772	5,641	6,254	19,533	6,703	26,919	17,722	2,997	14,725
June	83,029	5,656	6,267	19,556	6,715	27,073	17,762	2,997	14,765
July	83,162	5,671	6,277	19,577	6,724	27,127	17,786	2,996	14,790
Aug	83,272	5,561	6,294	19,620	6,740	27,226	17,831	2,996	14,835
Sept	83,564	5,656	6,303	19,634	6,753	27,335	17,883	2,992	14,891
Oct	83,697	5,671	6,313	19,665	6,756	27,408	17,884	2,986	14,898
Nov	83,965	5,693	6,335	19,714	6,774	27,548	17,901	2,982	14,919
Dec	84,165	5,776	6,344	19,710	6,785	27,623	17,927	2,977	14,950
1990: Jan	84,466	5,790	6,356	19,807	6,794	27,721	17,998	3,000	14,998
Feb	84,619	5,804	6,357	19,758	6,817	27,842	18,041	3,005	15,036
Mar	84,863	5,808	6,361	19,764	6,821	27,950	18,159	3,089	15,070
Apr	84,997	5,809	6,363	19,778	6,823	27,969	18,255	3,151	15,104
May	85,426	5,833	6,369	19,795	6,838	28,094	18,497	3,346	15,151
June	85,667	5,846	6,383	19,822	6,844	28,225	18,547	3,338	15,209
July	85,635	5,841	6,374	19,851	6,842	28,287	18,440	3,164	15,276
Aug	85,600	5,846	6,376	19,846	6,852	28,387	18,293	3,045	15,248
Sept	85,681	5,870	6,370	19,844	6,851	28,440	18,306	2,999	15,307
Oct	85,655	5,870	6,355	19,792	6,843	28,475	18,320	2,983	15,337
Nov	85,654	5,866	6,343	19,739	6,833	28,548	18,325	2,961	15,364
Dec [p]	85,591	5,881	6,328	19,683	6,831	28,556	18,312	2,948	15,364

Note.—Data in Tables B–43 and B–44 are based on reports from employing establishments and relate to full- and part-time wage and salary workers in nonagricultural establishments who received pay for any part of the pay period which includes the 12th of the month. Not comparable with labor force data (Tables B–32 through B–41) which include proprietors, self-employed persons, domestic servants, and unpaid family workers; which count persons as employed when they are not at work because of industrial disputes, bad weather, etc., even if they are not paid for the time off; and which are based on a sample of the working-age population. For description and details of the various establishment data, see "Employment and Earnings."

Source: Department of Labor, Bureau of Labor Statistics.

Table B–44.—*Average weekly hours and hourly and weekly earnings in private nonagricultural industries, 1947–90*

[For production or nonsupervisory workers; monthly data seasonally adjusted, except as noted]

Year or month	Average weekly hours			Average hourly earnings			Average weekly earnings						
	Total private [1]	Manufacturing		Total private [1]		Manufacturing	Total private [1]		Manufacturing (current dollars)	Construction (current dollars)	Retail trade (current dollars)	Percent change from a year earlier, total private [3]	
		Total	Overtime	Current dollars	1982 dollars [2]		Current dollars	1982 dollars [2]				Current dollars	1982 dollars [2]
1947	40.3	40.4	....	$1.131	$4.875	$1.216	$45.58	$196.47	$49.13	$58.83	$33.77	....	....
1948	40.0	40.0	....	1.225	4.900	1.327	49.00	196.00	53.08	65.23	36.22	7.5	−0.2
1949	39.4	39.1	....	1.275	5.141	1.376	50.24	202.58	53.80	67.56	38.42	2.5	3.4
1950	39.8	40.5	....	1.335	5.340	1.439	53.13	212.52	58.28	69.68	39.71	5.8	4.9
1951	39.9	40.6	....	1.45	5.39	1.56	57.86	215.09	63.34	76.96	42.82	8.9	1.2
1952	39.9	40.7	....	1.52	5.51	1.64	60.65	219.75	66.75	82.86	43.38	4.8	2.2
1953	39.6	40.5	....	1.61	5.79	1.74	63.76	229.35	70.47	86.41	45.36	5.1	4.4
1954	39.1	39.6	....	1.65	5.91	1.78	64.52	231.25	70.49	88.54	47.04	1.2	.8
1955	39.6	40.7	....	1.71	6.15	1.85	67.72	243.60	75.30	90.90	48.75	5.0	5.3
1956	39.3	40.4	2.8	1.80	6.38	1.95	70.74	250.85	78.78	96.38	50.18	4.5	3.0
1957	38.8	39.8	2.3	1.89	6.47	2.04	73.33	251.13	81.19	100.27	52.20	3.7	.1
1958	38.5	39.2	2.0	1.95	6.50	2.10	75.08	250.27	82.32	103.78	54.10	2.4	−.3
1959	39.0	40.3	2.7	2.02	6.69	2.19	78.78	260.86	88.26	108.41	56.15	4.9	4.2
1960	38.6	39.7	2.5	2.09	6.79	2.26	80.67	261.92	89.72	112.67	57.76	2.4	.4
1961	38.6	39.8	2.4	2.14	6.88	2.32	82.60	265.59	92.34	118.08	58.66	2.4	1.4
1962	38.7	40.4	2.8	2.22	7.07	2.39	85.91	273.60	96.56	122.47	60.96	4.0	3.0
1963	38.8	40.5	2.8	2.28	7.17	2.45	88.46	278.18	99.23	127.19	62.66	3.0	1.7
1964	38.7	40.7	3.1	2.36	7.33	2.53	91.33	283.63	102.97	132.06	64.81	3.2	2.0
1965	38.8	41.2	3.6	2.46	7.52	2.61	95.45	291.90	107.53	138.38	66.65	4.5	2.9
1966	38.6	41.4	3.9	2.56	7.62	2.71	98.82	294.11	112.19	146.26	68.50	3.5	.8
1967	38.0	40.6	3.4	2.68	7.72	2.82	101.84	293.49	114.49	154.95	70.86	3.1	−.2
1968	37.8	40.7	3.6	2.85	7.89	3.01	107.73	298.42	122.51	164.49	74.93	5.8	1.7
1969	37.7	40.6	3.6	3.04	7.98	3.19	114.61	300.81	129.51	181.54	78.67	6.4	.8
1970	37.1	39.8	3.0	3.23	8.03	3.35	119.83	298.08	133.33	195.45	82.31	4.6	−.9
1971	36.9	39.9	2.9	3.45	8.21	3.57	127.31	303.12	142.44	211.67	87.51	6.2	1.7
1972	37.0	40.5	3.5	3.70	8.53	3.82	136.90	315.44	154.71	221.19	92.03	7.5	4.1
1973	36.9	40.7	3.8	3.94	8.55	4.09	145.39	315.38	166.46	235.89	96.45	6.2	−.0
1974	36.5	40.0	3.3	4.24	8.28	4.42	154.76	302.27	176.80	249.25	102.55	6.4	−4.2
1975	36.1	39.5	2.6	4.53	8.12	4.83	163.53	293.06	190.79	266.08	108.63	5.7	−3.0
1976	36.1	40.1	3.1	4.86	8.24	5.22	175.45	297.37	209.32	283.73	114.56	7.3	1.5
1977	36.0	40.3	3.5	5.25	8.36	5.68	189.00	300.96	228.90	295.65	121.54	7.7	1.2
1978	35.8	40.4	3.6	5.69	8.40	6.17	203.70	300.89	249.27	318.69	130.14	7.8	−.0
1979	35.7	40.2	3.3	6.16	8.17	6.70	219.91	291.66	269.34	342.99	138.83	8.0	−3.1
1980	35.3	39.7	2.8	6.66	7.78	7.27	235.10	274.65	288.62	367.78	147.24	6.9	−5.8
1981	35.2	39.8	2.8	7.25	7.69	7.99	255.20	270.63	318.00	399.26	157.99	8.5	−1.5
1982	34.8	38.9	2.3	7.68	7.68	8.49	267.26	267.26	330.26	426.82	163.83	4.7	−1.2
1983	35.0	40.1	3.0	8.02	7.79	8.83	280.70	272.52	354.08	442.97	171.13	5.0	2.0
1984	35.2	40.7	3.4	8.32	7.80	9.19	292.86	274.73	374.03	458.51	174.47	4.3	.8
1985	34.9	40.5	3.3	8.57	7.77	9.54	299.09	271.16	386.37	464.46	174.81	2.1	−1.3
1986	34.8	40.7	3.4	8.76	7.81	9.73	304.85	271.94	396.01	466.75	175.80	1.9	.3
1987	34.8	41.0	3.7	8.98	7.73	9.91	312.50	269.16	406.31	480.44	178.80	2.5	−1.0
1988	34.7	41.1	3.9	9.28	7.69	10.19	322.02	266.79	418.81	495.73	183.62	3.0	−.9
1989	34.6	41.0	3.8	9.66	7.64	10.49	334.24	264.22	430.09	512.41	188.72	3.8	−1.0
1990 p	34.5	40.8	3.6	10.03	7.54	10.84	346.04	259.98	442.27	524.49	195.26	3.5	−1.6
1989: Jan	34.7	41.1	3.8	9.49	7.67	10.36	329.30	265.99	425.80	498.17	187.46	4.2	−.2
Feb	34.6	41.1	4.0	9.51	7.65	10.39	329.05	264.72	427.03	499.66	186.12	3.5	−1.1
Mar	34.6	41.0	3.9	9.54	7.63	10.40	330.08	264.06	426.40	506.90	187.34	4.3	−.7
Apr	34.7	41.1	3.9	9.60	7.63	10.42	333.12	264.59	428.26	510.89	188.50	4.3	−.9
May	34.5	41.0	3.8	9.60	7.59	10.43	331.20	262.03	427.63	504.38	187.56	3.2	−2.1
June	34.5	41.0	3.8	9.63	7.60	10.47	332.24	262.23	429.27	505.50	188.14	3.3	−1.8
July	34.6	41.0	3.8	9.70	7.64	10.50	335.62	264.27	430.50	516.26	189.37	4.0	−1.0
Aug	34.5	41.0	3.8	9.70	7.64	10.53	334.65	263.71	431.73	516.26	189.58	4.1	−.5
Sept	34.6	40.9	3.8	9.73	7.64	10.55	336.66	264.25	431.50	515.28	189.87	4.0	−.3
Oct	34.6	40.8	3.7	9.78	7.65	10.57	338.39	264.57	431.26	519.90	190.74	3.6	−.8
Nov	34.5	40.7	3.7	9.78	7.62	10.58	337.41	262.99	430.61	524.54	190.37	3.5	−1.0
Dec	34.4	40.6	3.7	9.83	7.63	10.62	338.15	262.54	431.17	516.00	191.23	3.5	−1.0
1990: Jan	34.4	40.7	3.6	9.82	7.54	10.57	337.81	259.45	430.20	523.03	192.38	2.7	−2.4
Feb	34.6	40.8	3.6	9.88	7.55	10.67	341.85	261.35	435.34	527.48	193.34	3.9	−1.2
Mar	34.6	40.8	3.7	9.93	7.56	10.73	343.58	261.48	437.78	523.18	195.17	3.7	−1.5
Apr	34.5	40.7	3.5	9.96	7.57	10.75	343.62	261.31	437.53	508.03	195.46	2.8	−1.6
May	34.5	40.9	3.8	9.98	7.58	10.81	344.31	261.63	442.13	520.98	196.04	4.0	−.1
June	34.7	41.0	3.8	10.03	7.58	10.86	348.04	262.87	445.26	531.35	196.62	4.5	−.0
July	34.5	40.9	3.7	10.07	7.58	10.89	347.42	261.61	445.40	516.00	196.23	3.4	−1.0
Aug	34.5	41.0	3.8	10.09	7.54	10.90	348.11	259.98	446.90	526.40	195.73	3.8	−1.7
Sept	34.7	41.0	3.7	10.13	7.50	10.93	351.51	260.38	448.13	530.69	197.39	4.3	−1.6
Oct	34.2	40.7	3.6	10.12	7.45	10.97	346.10	254.67	446.48	511.34	194.26	2.1	−3.8
Nov	34.4	40.5	3.5	10.14	7.44	10.97	348.82	256.11	444.29	530.92	197.17	3.1	−3.0
Dec p	34.6	40.7	3.6	10.19	7.46	11.01	352.57	258.10	448.11	536.43	196.60	4.0	−2.0

[1] Also includes other private industry groups shown in Table B–43.

[2] Current dollars divided by the consumer price index for urban wage earners and clerical workers on a 1982=100 base.

[3] Monthly percent changes are based on data not seasonally adjusted.

Note.—See Note, Table B–43.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–45.—*Employment cost index, private industry, 1975–90*

Year and month	Total private			Goods-producing			Service-producing			Manufacturing			Nonmanufacturing		
	Total compensation	Wages and salaries	Benefits [1]	Total compensation	Wages and salaries	Benefits [1]	Total compensation	Wages and salaries	Benefits [1]	Total compensation	Wages and salaries	Benefits [1]	Total compensation	Wages and salaries	Benefits [1]
	Index, June 1989=100; not seasonally adjusted														
December:															
1975	......	45.9	......	......	46.9	......	......	45.1	......	......	46.3	......	......	45.7	......
1976	......	49.2	......	......	50.4	......	......	48.2	......	......	49.7	......	......	48.9	......
1977	......	52.6	......	......	54.3	......	......	51.4	......	......	53.6	......	......	52.1	......
1978	......	56.6	......	......	58.8	......	......	55.1	......	......	58.1	......	......	55.9	......
1979	59.1	61.5	53.2	60.7	63.7	54.6	57.7	60.0	51.9	60.1	63.0	54.2	58.5	60.8	52.5
1980	64.8	67.1	59.4	66.7	69.7	60.5	63.3	65.3	58.4	66.0	68.9	59.9	64.2	66.2	59.1
1981	71.2	73.0	66.6	73.3	75.7	68.2	69.5	71.1	65.1	72.5	74.9	67.5	70.4	72.1	66.1
1982	75.8	77.6	71.4	77.8	80.0	73.2	74.1	75.9	69.6	76.9	79.1	72.4	75.1	76.8	70.6
1983	80.1	81.4	76.7	81.6	83.2	78.3	78.9	80.2	75.2	80.8	82.5	77.5	79.6	81.0	76.2
1984	84.0	84.8	81.7	85.4	86.4	83.2	82.9	83.7	80.4	85.0	86.1	82.7	83.4	84.2	81.1
1985	87.3	88.3	84.6	88.2	89.4	85.7	86.6	87.7	83.6	87.8	89.2	85.0	87.0	88.0	84.4
1986	90.1	91.1	87.5	91.0	92.3	88.3	89.3	90.3	86.8	90.7	92.1	87.5	89.7	90.6	87.5
1987	93.1	94.1	90.5	93.8	95.2	90.9	92.6	93.4	90.2	93.4	95.2	89.8	92.9	93.7	91.0
1988	97.6	98.0	96.7	97.9	98.2	97.3	97.3	97.8	96.1	97.6	98.1	96.6	97.5	97.8	96.8
1989	102.3	102.0	102.6	102.1	102.0	102.6	102.3	102.2	102.6	102.0	101.9	102.3	102.3	102.2	102.8
1990	107.0	106.1	109.4	107.0	105.8	109.9	107.0	106.3	109.0	107.2	106.2	109.5	106.9	106.1	109.3
1989: Mar	98.8	99.0	98.4	98.9	99.1	98.7	98.8	99.1	98.2	98.9	99.0	98.8	98.8	99.1	98.2
June	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sept	101.2	101.2	101.4	101.1	101.0	101.5	101.3	101.4	101.4	101.1	100.9	101.6	101.3	101.4	101.4
Dec	102.3	102.0	102.6	102.1	102.0	102.6	102.3	102.2	102.6	102.0	101.9	102.3	102.3	102.2	102.8
1990: Mar	103.9	103.2	105.5	103.9	103.1	105.7	103.8	103.3	105.3	104.0	103.3	105.5	103.8	103.2	105.4
June	105.2	104.5	106.9	105.2	104.2	107.2	105.2	104.6	106.6	105.3	104.5	106.9	105.1	104.5	106.9
Sept	106.2	105.4	108.3	106.2	105.1	108.7	106.2	105.7	107.9	106.4	105.4	108.4	106.2	105.4	108.2
Dec	107.0	106.1	109.4	107.0	105.8	109.9	107.0	106.3	109.0	107.2	106.2	109.5	106.9	106.1	109.3
	Index, June 1989=100; seasonally adjusted														
1989: Mar	98.8	99.1	98.1	98.9	99.1	98.4	98.8	99.1	97.9	98.7	99.0	98.2	98.8	99.2	97.9
June	100.0	100.0	99.8	100.0	100.0	99.8	99.9	100.0	99.9	99.9	100.0	99.8	99.9	100.0	99.9
Sept	101.3	101.1	101.5	101.2	101.0	101.6	101.3	101.2	101.4	101.2	100.9	101.7	101.2	101.2	101.4
Dec	102.4	102.2	103.1	102.3	102.0	103.0	102.5	102.3	103.0	102.3	101.9	103.0	102.5	102.3	103.1
1990: Mar	103.8	103.3	105.1	103.8	103.1	105.3	103.8	103.4	105.0	103.8	103.3	104.9	103.8	103.3	105.1
June	105.1	104.4	106.7	105.1	104.2	107.0	105.1	104.6	106.5	105.2	104.5	106.7	105.0	104.5	106.8
Sept	106.2	105.4	108.4	106.2	105.1	108.8	106.2	105.5	108.0	106.5	105.4	108.5	106.1	105.2	108.2
Dec	107.2	106.2	109.9	107.2	105.8	110.4	107.2	106.4	109.5	107.5	106.2	110.2	107.2	106.2	109.7
	Percent change from 12 months earlier, not seasonally adjusted														
December:															
1976	......	7.2	......	......	7.5	......	......	6.9	......	......	7.3	......	......	7.0	......
1977	......	6.9	......	......	7.7	......	......	6.6	......	......	7.8	......	......	6.5	......
1978	......	7.6	......	......	8.3	......	......	7.2	......	......	8.4	......	......	7.3	......
1979	......	8.7	......	......	8.3	......	......	8.9	......	......	8.4	......	......	8.8	......
1980	9.6	9.1	11.7	9.9	9.4	10.8	9.7	8.8	12.5	9.8	9.4	10.5	9.7	8.9	12.6
1981	9.9	8.8	12.1	9.9	8.6	12.7	9.8	8.9	11.5	9.8	8.7	12.7	9.7	8.9	11.8
1982	6.5	6.3	7.2	6.1	5.7	7.3	6.6	6.8	6.9	6.1	5.6	7.3	6.7	6.5	6.8
1983	5.7	4.9	7.4	4.9	4.0	7.0	6.5	5.7	8.0	5.1	4.3	7.0	6.0	5.5	7.9
1984	4.9	4.2	6.5	4.7	3.8	6.3	5.1	4.4	6.9	5.2	4.4	6.7	4.8	4.0	6.4
1985	3.9	4.1	3.5	3.3	3.5	3.0	4.5	4.8	4.0	3.3	3.6	2.8	4.3	4.5	4.1
1986	3.2	3.2	3.4	3.2	3.2	3.0	3.1	3.0	3.8	3.3	3.3	2.9	3.1	3.0	3.7
1987	3.3	3.3	3.4	3.1	3.1	2.9	3.7	3.4	3.9	3.0	3.4	2.6	3.6	3.4	4.0
1988	4.8	4.1	6.9	4.4	3.2	7.0	5.1	4.7	6.5	4.5	3.0	7.6	5.0	4.4	6.4
1989	4.8	4.1	6.1	4.3	3.9	5.4	5.1	4.5	6.8	4.5	3.9	5.9	4.9	4.5	6.2
1990	4.6	4.0	6.6	4.8	3.7	7.1	4.6	4.0	6.2	5.1	4.2	7.0	4.5	3.8	6.3
1989: Mar	4.6	4.2	5.4	3.6	3.1	4.6	5.3	5.1	6.2	3.8	3.1	5.4	5.0	4.9	5.4
June	4.5	4.1	5.6	3.6	3.2	4.5	5.2	4.7	6.6	4.0	3.3	5.4	4.8	4.4	5.8
Sept	4.8	4.3	6.0	4.1	3.6	5.2	5.3	4.9	6.8	4.3	3.7	6.1	5.0	4.6	6.2
Dec	4.8	4.1	6.1	4.3	3.9	5.4	5.1	4.5	6.8	4.5	3.9	5.9	4.9	4.5	6.2
1990: Mar	5.2	4.2	7.2	5.1	4.0	7.1	5.1	4.2	7.2	5.2	4.3	6.8	5.1	4.1	7.3
June	5.2	4.5	6.9	5.2	4.2	7.2	5.2	4.6	6.6	5.3	4.5	6.9	5.1	4.5	6.9
Sept	4.9	4.2	6.8	5.0	4.1	7.1	4.8	4.2	6.4	5.2	4.5	6.7	4.8	3.9	6.7
Dec	4.6	4.0	6.6	4.8	3.7	7.1	4.6	4.0	6.2	5.1	4.2	7.0	4.5	3.8	6.3
	Percent change from 3 months earlier, seasonally adjusted														
1989: Mar	1.0	1.1	1.0	0.8	0.9	0.7	1.2	1.2	1.5	0.9	0.9	1.0	1.1	1.3	0.8
June	1.2	.9	1.7	1.1	.9	1.4	1.1	.9	2.0	1.2	1.0	1.6	1.1	.8	2.0
Sept	1.3	1.1	1.7	1.2	1.0	1.8	1.4	1.2	1.5	1.3	.9	1.9	1.3	1.2	1.5
Dec	1.1	1.1	1.6	1.1	1.0	1.4	1.2	1.1	1.6	1.1	1.0	1.3	1.3	1.1	1.7
1990: Mar	1.4	1.1	1.9	1.5	1.1	2.2	1.3	1.1	1.9	1.5	1.4	1.8	1.3	1.0	1.9
June	1.3	1.1	1.5	1.3	1.1	1.6	1.3	1.2	1.4	1.3	1.2	1.7	1.2	1.2	1.6
Sept	1.0	1.0	1.6	1.0	.9	1.7	1.0	.9	1.4	1.2	.9	1.7	1.0	.7	1.3
Dec	.9	.8	1.4	.9	.7	1.5	.9	.9	1.4	.9	.8	1.6	1.0	1.0	1.4

[1] Employer costs for employee benefits.

Note.—The employment cost index is a measure of the change in the cost of labor, free from the influence of employment shifts among occupations and industries.

Data exclude farm and household workers.

Through December 1981, percent changes are based on unrounded data; thereafter changes are based on indexes as published.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–46.—*Productivity and related data, business sector, 1947–90*

[1982=100; quarterly data seasonally adjusted]

Year or quarter	Output per hour of all persons		Output [1]		Hours of all persons [2]		Compensation per hour [3]		Real compensation per hour [4]		Unit labor costs		Implicit price deflator [5]	
	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector
1947	43.6	50.7	34.3	33.6	78.7	66.2	10.4	11.4	45.2	49.3	24.0	22.5	24.0	22.8
1948	45.8	52.6	36.3	35.5	79.3	67.4	11.3	12.4	45.4	49.5	24.7	23.5	25.7	24.4
1949	46.3	53.5	35.5	34.7	76.7	64.8	11.5	12.7	46.7	51.7	24.9	23.8	25.5	24.7
1950	50.2	56.9	38.9	38.0	77.5	66.8	12.4	13.5	49.5	54.1	24.7	23.8	25.9	25.2
1951	52.2	58.6	41.6	40.9	79.6	69.8	13.6	14.7	50.5	54.6	26.0	25.1	27.6	26.6
1952	53.9	60.0	42.9	42.3	79.7	70.5	14.5	15.5	52.6	56.5	26.8	25.9	27.9	27.1
1953	55.9	61.3	44.9	44.2	80.3	72.2	15.4	16.4	55.8	59.4	27.6	26.8	28.1	27.6
1954	56.8	62.2	44.1	43.3	77.7	69.7	15.9	17.0	57.2	60.8	28.1	27.3	28.5	28.0
1955	58.5	64.0	47.1	46.4	80.5	72.5	16.3	17.6	58.9	63.3	27.9	27.4	29.2	28.9
1956	59.3	64.4	48.5	47.9	81.7	74.3	17.4	18.6	61.9	66.2	29.4	29.0	30.1	29.8
1957	60.9	65.6	49.0	48.5	80.5	73.9	18.6	19.7	63.9	67.7	30.5	30.1	31.2	30.9
1958	62.7	67.1	48.1	47.5	76.7	70.8	19.5	20.5	64.9	68.5	31.0	30.6	31.7	31.3
1959	64.8	69.3	51.6	51.2	79.7	73.8	20.3	21.4	67.3	70.8	31.3	30.8	32.3	32.1
1960	65.9	70.0	52.5	52.0	79.7	74.3	21.2	22.3	69.1	72.7	32.2	31.8	32.8	32.5
1961	68.2	72.3	53.5	53.1	78.5	73.4	22.0	23.0	71.0	74.4	32.3	31.9	32.9	32.7
1962	70.7	74.6	56.3	56.0	79.7	75.0	23.0	24.0	73.6	76.6	32.6	32.1	33.6	33.3
1963	73.5	77.3	58.9	58.6	80.1	75.8	23.9	24.8	75.4	78.3	32.5	32.1	33.9	33.7
1964	76.8	80.4	62.4	62.3	81.4	77.5	25.2	26.0	78.3	80.9	32.8	32.3	34.2	34.1
1965	79.1	82.4	66.4	66.3	83.9	80.4	26.1	26.9	80.1	82.3	33.1	32.6	35.0	34.8
1966	81.4	84.3	69.8	70.0	85.8	83.1	28.0	28.5	83.4	84.8	34.4	33.8	36.2	35.8
1967	83.8	86.4	71.7	71.8	85.5	83.1	29.6	30.1	85.5	87.0	35.3	34.9	37.1	36.9
1968	86.3	89.0	74.8	75.1	86.7	84.4	32.0	32.5	88.7	90.1	37.1	36.5	38.8	38.6
1969	86.5	88.7	76.8	77.1	88.8	86.9	34.3	34.7	90.3	91.3	39.7	39.1	40.8	40.5
1970	87.3	89.1	76.1	76.3	87.2	85.6	36.9	37.2	91.8	92.5	42.3	41.7	42.7	42.5
1971	90.1	91.8	78.2	78.4	86.8	85.4	39.3	39.6	93.5	94.3	43.6	43.2	44.8	44.6
1972	92.8	94.6	83.1	83.4	89.6	88.2	41.8	42.2	96.4	97.3	45.0	44.6	46.6	46.3
1973	95.0	96.6	88.1	88.5	92.8	91.6	45.4	45.7	98.6	99.2	47.8	47.3	49.6	48.4
1974	93.2	94.8	86.5	86.9	92.9	91.7	49.9	50.2	97.6	98.2	53.5	53.0	54.3	53.4
1975	95.1	96.5	84.7	84.9	89.1	88.0	54.8	55.1	98.3	98.9	57.6	57.1	59.9	59.2
1976	97.9	99.1	89.6	90.0	91.6	90.8	59.7	59.9	101.3	101.5	61.0	60.4	63.4	62.9
1977	99.7	100.9	94.8	95.3	95.1	94.5	64.5	64.6	102.7	102.9	64.7	64.1	67.5	67.0
1978	100.6	101.8	100.3	101.0	99.7	99.3	70.1	70.2	103.7	103.9	69.7	69.0	72.5	71.7
1979	99.5	100.2	102.3	102.9	102.8	102.6	77.0	76.9	102.3	102.2	77.4	76.7	79.0	78.1
1980	99.2	99.9	101.1	101.7	101.9	101.8	85.1	85.1	99.7	99.6	85.8	85.2	86.2	85.7
1981	100.7	100.9	103.2	103.4	102.5	102.5	93.0	93.1	98.8	98.8	92.4	92.3	94.4	94.0
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	102.3	102.9	104.2	105.0	101.8	102.0	103.8	104.0	100.6	100.7	101.4	101.0	103.3	103.5
1984	104.9	105.1	113.0	113.7	107.6	108.1	108.0	108.1	100.4	100.4	102.9	102.8	106.8	106.6
1985	107.1	106.5	117.7	118.1	109.9	110.9	112.8	112.5	101.2	100.9	105.4	105.6	109.5	109.8
1986	109.5	108.7	121.3	121.6	110.8	111.9	118.7	118.2	104.5	104.1	108.4	108.8	111.8	112.3
1987	110.7	109.8	126.4	126.8	114.1	115.5	123.1	122.4	104.5	104.0	111.2	111.6	114.8	115.3
1988	113.2	112.5	133.0	134.0	117.5	119.1	128.6	127.8	104.9	104.3	113.7	113.7	118.2	118.4
1989	112.6	111.7	135.8	136.7	120.5	122.3	132.9	131.9	103.4	102.7	117.9	118.1	122.8	123.0
1990: [p]	111.9	110.8	136.1	137.0	121.6	123.6	137.7	136.5	101.7	100.8	123.0	123.2	127.5	127.7
1982: IV	100.6	100.4	99.5	99.3	98.9	98.9	102.1	102.1	100.6	100.6	101.5	101.7	101.4	101.5
1983: IV	103.2	103.8	107.6	108.7	104.3	104.7	105.3	105.2	100.5	100.4	102.0	101.3	104.8	104.7
1984: IV	105.3	105.4	114.5	115.1	108.7	109.2	109.5	109.6	100.4	100.4	104.0	104.0	107.9	107.9
1985: IV	108.0	107.1	119.3	119.6	110.5	111.7	115.2	114.6	102.0	101.5	106.7	107.1	110.5	111.0
1986: IV	109.4	108.4	122.2	122.4	111.7	112.9	120.8	120.3	105.5	105.1	110.4	111.0	112.8	113.4
1987: IV	112.0	110.9	129.4	129.7	115.6	117.0	125.5	124.8	105.0	104.4	112.1	112.6	115.7	116.2
1988: I	113.2	112.2	131.2	131.6	115.8	117.3	126.3	125.5	104.7	104.1	111.5	111.9	116.2	116.6
II	112.9	112.0	132.6	133.4	117.5	119.1	127.9	127.1	104.9	104.3	113.3	113.5	117.5	117.8
III	113.6	112.8	133.8	134.8	117.8	119.5	129.7	128.8	105.1	104.4	114.2	114.2	118.9	118.8
IV	113.1	112.9	134.5	136.0	118.8	120.5	130.8	130.0	104.9	104.2	115.6	115.2	120.3	120.5
1989: I	113.0	112.1	135.6	136.4	120.0	121.7	131.8	131.0	104.3	103.7	116.7	116.9	121.2	121.4
II	113.0	112.0	135.9	136.8	120.2	122.2	132.7	131.6	103.5	102.6	117.4	117.5	122.5	122.7
III	112.6	111.7	136.1	137.1	120.9	122.7	133.1	132.1	103.1	102.3	118.2	118.3	123.3	123.5
IV	111.9	111.0	135.5	136.3	121.0	122.8	133.8	132.9	102.6	101.9	119.5	119.7	124.3	124.7
1990: I	111.7	110.7	136.0	136.8	121.7	123.7	135.3	134.2	101.7	100.9	121.1	121.3	125.8	125.8
II	111.9	110.7	136.4	137.2	121.9	123.9	137.0	135.8	102.1	101.2	122.5	122.7	127.2	127.3
III	112.1	110.9	136.5	137.4	121.8	123.9	138.6	137.4	101.7	100.8	123.6	123.9	128.2	128.4
IV [p]	112.0	110.9	135.7	136.4	121.1	123.0	139.8	138.7	100.9	100.1	124.8	125.0	128.8	129.2

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[1] Output refers to gross domestic product originating in the sector in 1982 dollars.

[2] Hours at work of all persons engaged in the sector, including hours of proprietors and unpaid family workers. Estimates based primarily on establishment data.

[3] Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Also includes an estimate of wages, salaries, and supplemental payments for the self-employed.

[4] Hourly compensation divided by the consumer price index for all urban consumers.

[5] Current dollar gross domestic product divided by constant dollar gross domestic product.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–47.—*Changes in productivity and related data, business sector, 1948–90*

[Percent change from preceding period; quarterly data at seasonally adjusted annual rates]

Year or quarter	Output per hour of all persons		Output[1]		Hours of all persons[2]		Compensation per hour[3]		Real compensation per hour[4]		Unit labor costs		Implicit price deflator[5]	
	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector
1948	5.1	3.8	5.9	5.6	0.8	1.8	8.5	8.5	0.4	0.4	3.3	4.6	7.2	7.2
1949	1.0	1.6	−2.3	−2.3	−3.3	−3.8	1.7	3.0	2.9	4.3	.7	1.3	−.6	1.3
1950	8.5	6.5	9.5	9.7	1.0	3.0	7.4	6.1	6.1	4.8	−1.0	−.3	1.5	1.8
1951	4.1	3.0	7.1	7.7	2.8	4.6	9.9	8.7	1.8	.8	5.5	5.5	6.3	5.6
1952	3.2	2.3	3.2	3.2	.0	1.0	6.3	5.6	4.3	3.6	3.0	3.3	1.3	2.0
1953	3.8	2.2	4.6	4.6	.8	2.4	6.8	5.8	6.0	5.0	3.0	3.5	.7	1.8
1954	1.5	1.4	−1.8	−2.0	−3.3	−3.4	3.2	3.2	2.4	2.5	1.7	1.8	1.2	1.5
1955	3.1	3.0	6.9	7.1	3.7	4.0	2.5	3.6	2.9	4.0	−.5	.6	2.6	3.2
1956	1.4	.6	2.8	3.1	1.5	2.5	6.7	6.1	5.1	4.6	5.3	5.5	3.2	3.3
1957	2.7	1.9	1.1	1.3	−1.5	−.6	6.6	5.8	3.2	2.4	3.8	3.8	3.5	3.6
1958	2.9	2.3	−1.8	−2.0	−4.6	−4.2	4.6	4.0	1.7	1.1	1.6	1.7	1.6	1.2
1959	3.3	3.2	7.3	7.7	3.8	4.3	4.4	4.1	3.7	3.4	1.0	.9	2.0	2.5
1960	1.7	1.1	1.8	1.7	.1	.6	4.3	4.4	2.6	2.6	2.6	3.3	1.4	1.4
1961	3.6	3.2	1.9	2.0	−1.6	−1.1	3.9	3.3	2.9	2.3	.3	.1	.5	.6
1962	3.6	3.3	5.2	5.5	1.6	2.1	4.7	4.1	3.6	3.1	1.0	.8	1.9	2.0
1963	4.0	3.6	4.6	4.7	.5	1.1	3.8	3.5	2.4	2.2	−.2	−.1	.9	.9
1964	4.4	3.9	6.0	6.3	1.5	2.3	5.3	4.6	3.9	3.3	.8	.7	1.0	1.2
1965	3.0	2.6	6.3	6.4	3.1	3.7	3.9	3.4	2.2	1.7	.8	.8	2.3	2.0
1966	2.9	2.2	5.2	5.6	2.2	3.3	7.1	6.0	4.1	3.1	4.0	3.7	3.3	3.1
1967	2.9	2.5	2.7	2.5	−.3	−.0	5.7	5.8	2.5	2.6	2.6	3.2	2.5	2.9
1968	3.0	2.9	4.4	4.7	1.4	1.7	8.2	7.9	3.8	3.6	5.1	4.8	4.6	4.6
1969	.3	−.3	2.7	2.7	2.4	2.9	7.3	6.8	1.7	1.3	6.9	7.1	5.1	5.0
1970	.9	.5	−.9	−1.1	−1.8	−1.5	7.5	7.2	1.7	1.4	6.5	6.7	4.7	4.9
1971	3.2	3.0	2.7	2.7	−.4	−.3	6.4	6.4	1.9	2.0	3.1	3.4	4.9	5.0
1972	3.0	3.0	6.3	6.4	3.2	3.3	6.4	6.5	3.1	3.2	3.2	3.3	4.0	3.6
1973	2.3	2.2	6.0	6.2	3.6	3.9	8.7	8.3	2.3	2.0	6.2	6.0	6.4	4.8
1974	−1.9	−1.9	−1.8	−1.8	.1	.1	9.9	9.9	−1.1	−1.0	12.0	12.1	9.6	10.2
1975	2.1	1.9	−2.1	−2.3	−4.1	−4.1	9.9	9.8	.7	.7	7.7	7.8	10.3	10.8
1976	2.9	2.7	5.8	6.0	2.8	3.2	9.0	8.6	3.1	2.7	5.9	5.7	5.9	6.3
1977	1.9	1.7	5.8	5.9	3.8	4.1	8.0	7.9	1.4	1.4	6.0	6.1	6.4	6.6
1978	.9	.9	5.8	6.0	4.8	5.0	8.6	8.7	1.0	1.0	7.7	7.7	7.3	7.0
1979	−1.1	−1.5	2.0	1.9	3.1	3.4	9.8	9.6	−1.4	−1.6	11.1	11.2	9.0	8.9
1980	−.2	−.3	−1.1	−1.2	−.9	−.8	10.6	10.6	−2.5	−2.5	10.9	11.0	9.0	9.7
1981	1.5	1.0	2.1	1.7	.6	.7	9.3	9.4	−1.0	−.8	7.7	8.3	9.6	9.7
1982	−.7	−.9	−3.1	−3.3	−2.5	−2.4	7.5	7.4	1.3	1.2	8.3	8.4	5.9	6.3
1983	2.3	2.9	4.2	5.0	1.8	2.0	3.8	4.0	.6	.7	1.4	1.0	3.3	3.5
1984	2.5	2.1	8.4	8.3	5.7	6.0	4.1	3.9	−.2	−.4	1.5	1.8	3.3	3.0
1985	2.0	1.3	4.2	3.9	2.1	2.5	4.4	4.1	.8	.5	2.3	2.8	2.5	3.0
1986	2.3	2.0	3.1	3.0	.8	.9	5.2	5.1	3.2	3.2	2.8	3.0	2.1	2.3
1987	1.1	1.0	4.1	4.2	3.0	3.2	3.7	3.6	.1	−.1	2.6	2.5	2.7	2.7
1988	2.2	2.5	5.3	5.7	3.0	3.1	4.5	4.4	.4	.3	2.2	1.9	3.0	2.7
1989	−.5	−.7	2.1	2.0	2.6	2.7	3.3	3.2	−1.5	−1.5	3.8	3.9	3.9	3.9
1990 p	−.6	−.8	.3	.2	.9	1.1	3.6	3.5	−1.7	−1.8	4.3	4.3	3.8	3.8
1988: I	4.6	4.7	5.7	5.9	1.0	1.1	2.5	2.4	−.9	−1.0	−2.0	−2.2	1.7	1.4
II	−1.1	−.5	4.6	5.6	5.8	6.1	5.3	5.1	.8	.7	6.5	5.7	4.8	4.1
III	2.5	2.8	3.5	4.1	1.0	1.3	5.6	5.3	.6	.4	3.1	2.5	4.7	3.4
IV	−1.6	.2	2.0	3.6	3.6	3.4	3.4	3.8	−.9	−.5	5.0	3.6	4.9	5.9
1989: I	−.5	−2.7	3.5	1.2	4.0	4.0	3.3	3.3	−2.0	−2.0	3.8	6.1	3.1	2.8
II	.1	−.3	.9	1.3	.8	1.6	2.6	1.7	−3.2	−4.1	2.5	2.0	4.3	4.4
III	−1.6	−1.0	.6	.6	2.2	1.6	1.1	1.6	−1.7	−1.2	2.8	2.6	2.5	2.6
IV	−2.3	−2.5	−1.8	−2.1	.4	.5	2.2	2.3	−1.8	−1.6	4.6	5.0	3.5	3.9
1990: I	−.9	−1.3	1.4	1.4	2.3	2.8	4.5	3.9	−3.3	−3.8	5.4	5.3	4.6	3.8
II	.6	.3	1.2	1.2	.5	.9	5.4	5.0	1.6	1.2	4.7	4.7	4.6	4.8
III	.9	.6	.5	.4	−.4	−.2	4.6	4.7	−1.9	−1.8	3.7	4.1	3.2	3.6
IV p	−.5	.1	−2.5	−2.7	−2.1	−2.7	3.4	3.8	−3.1	−2.7	3.9	3.7	2.0	2.4

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[1] Output refers to gross domestic product originating in the sector in 1982 dollars.

[2] Hours at work of all persons engaged in the sector, including hours of proprietors and unpaid family workers. Estimates based primarily on establishment data.

[3] Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Also includes an estimate of wages, salaries, and supplemental payments for the self-employed.

[4] Hourly compensation divided by the consumer price index for all urban consumers.

[5] Current dollar gross domestic product divided by constant dollar gross domestic product.

Note.—Percent changes are based on original data and therefore may differ slightly from percent changes based on indexes in Table B–46.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–48.—*Industrial production indexes, major industry divisions, 1939–90*

[1987=100; monthly data seasonally adjusted]

Year or month	Total industrial production	Manufacturing			Mining	Utilities
		Total	Durable	Nondurable		
1989 proportion	*100.0*	*85.1*	*48.5*	*36.6*	*7.4*	*7.6*
1939	12.5	11.6	9.4	14.3	38.2	6.2
1940	14.4	13.6	12.5	15.1	42.4	6.9
1941	18.2	17.4	16.6	18.2	45.0	7.7
1942	20.9	20.3	21.1	18.9	46.4	8.7
1943	25.3	25.3	28.7	20.3	47.5	9.6
1944	27.3	27.3	31.7	21.1	50.9	10.2
1945	23.4	22.9	24.0	21.1	49.9	10.4
1946	20.2	19.0	16.7	21.7	49.0	10.8
1947	22.7	21.2	19.9	22.6	55.5	11.7
1948	23.6	22.0	20.8	23.4	58.3	13.0
1949	22.3	20.8	18.9	23.0	51.7	13.9
1950	25.8	24.2	23.0	25.6	57.7	15.8
1951	28.0	26.1	25.9	26.4	63.4	18.1
1952	29.1	27.2	27.5	26.9	62.8	19.6
1953	31.6	29.6	31.1	28.0	64.5	21.3
1954	29.9	27.7	27.4	28.2	63.2	22.9
1955	33.7	31.3	31.3	31.3	70.5	25.6
1956	35.1	32.5	32.4	32.9	74.2	28.1
1957	35.6	32.9	32.6	33.5	74.3	30.0
1958	33.3	30.6	28.5	33.7	68.1	31.4
1959	37.3	34.5	32.8	37.1	71.3	34.5
1960	38.1	35.2	33.3	38.0	72.7	36.9
1961	38.4	35.3	32.7	39.1	73.1	39.0
1962	41.6	38.4	36.3	41.5	75.2	41.9
1963	44.0	40.7	38.7	43.8	78.2	44.8
1964	47.0	43.5	41.4	46.6	81.4	48.7
1965	51.7	48.2	47.1	49.8	84.4	51.7
1966	56.3	52.6	52.3	52.9	88.9	55.6
1967	57.5	53.6	52.9	54.6	90.6	58.4
1968	60.7	56.6	55.5	58.1	94.1	63.1
1969	63.5	59.1	57.7	61.1	97.8	68.7
1970	61.4	56.4	53.3	61.1	100.4	72.9
1971	62.2	57.3	53.1	63.6	97.8	76.4
1972	68.3	63.3	59.3	69.3	99.9	81.3
1973	73.8	68.9	66.2	72.7	100.8	84.5
1974	72.7	67.9	64.8	72.3	100.3	83.5
1975	66.3	61.1	56.7	67.7	98.0	84.3
1976	72.4	67.4	62.6	74.6	98.9	87.6
1977	78.2	73.3	68.7	80.1	101.5	89.9
1978	82.6	77.8	73.9	83.5	104.6	92.7
1979	85.7	80.9	78.3	84.6	106.6	95.3
1980	84.1	78.8	75.7	83.1	110.0	95.9
1981	85.7	80.3	77.4	84.5	114.3	94.3
1982	81.9	76.6	72.7	82.5	109.3	91.8
1983	84.9	80.9	76.8	87.0	104.8	93.6
1984	92.8	89.3	88.4	90.8	111.9	97.0
1985	94.4	91.6	91.8	91.5	109.0	99.5
1986	95.3	94.3	93.9	94.9	101.0	96.3
1987	100.0	100.0	100.0	100.0	100.0	100.0
1988	105.4	105.8	107.6	103.6	101.8	104.4
1989	108.1	108.9	110.9	106.4	100.5	107.1
1990 [p]	109.1	109.8	111.6	107.7	102.4	107.6
1989: Jan	107.7	108.9	111.1	106.2	100.8	102.8
Feb	107.6	108.3	110.5	105.6	98.9	105.8
Mar	107.7	108.7	110.9	105.9	98.3	107.2
Apr	108.6	109.4	111.6	106.5	101.7	106.4
May	108.3	109.2	111.4	106.4	101.1	106.3
June	108.4	109.3	111.8	106.2	100.4	106.3
July	107.8	108.6	110.6	106.1	100.0	106.6
Aug	108.2	109.1	111.3	106.2	100.7	106.2
Sept	108.2	109.1	111.5	106.0	101.6	105.9
Oct	107.7	108.4	109.4	107.2	100.7	107.4
Nov	108.1	108.9	110.1	107.3	101.2	108.3
Dec	108.6	108.8	110.4	106.7	100.1	116.1
1990: Jan	107.5	108.1	108.6	107.5	101.7	106.8
Feb	108.5	109.6	110.7	108.3	101.0	104.0
Mar	108.9	109.8	111.9	107.2	101.1	106.2
Apr	108.8	109.5	111.1	107.5	102.9	106.7
May	109.4	110.3	112.6	107.4	102.2	107.1
June	110.1	110.8	113.4	107.6	102.2	109.7
July	110.4	111.1	113.4	108.1	104.0	109.7
Aug	110.5	111.1	113.5	108.1	102.4	111.4
Sept	110.6	111.2	113.8	108.0	103.9	110.3
Oct	109.8	110.5	112.4	108.2	102.4	109.0
Nov [p]	107.8	108.5	109.6	107.1	102.1	105.1
Dec [p]	107.1	107.5	107.9	106.9	102.8	107.1

Source: Board of Governors of the Federal Reserve System.

TABLE B–49.—*Industrial production indexes, market groupings, 1947–90*

[1987 = 100; monthly data seasonally adjusted]

Year or month	Total industrial production	Final products									Intermediate products	Materials			
		Total	Consumer goods				Equipment					Total	Durable	Nondurable	Energy
			Total	Automotive products	Other durable goods	Nondurable goods	Total [1]	Business	Defense and space						
1989 proportion	*100.0*	*46.5*	*25.7*	*2.4*	*3.1*	*20.1*	*20.8*	*15.3*	*4.8*		*14.6*	*38.9*	*20.0*	*8.8*	*10.2*
1947	22.7	20.8	25.4	21.7	22.8	27.0	15.0	14.7	7.5		22.4	25.1	21.5		
1948	23.6	21.5	26.2	22.6	23.8	27.7	15.8	15.3	8.8		23.6	26.2	22.1		
1949	22.3	20.9	26.1	22.5	22.0	27.9	14.1	13.4	9.2		22.4	23.9	19.8		
1950	25.8	23.5	29.7	28.3	30.4	30.3	15.3	14.3	10.8		26.1	28.6	24.9		
1951	28.0	25.4	29.4	25.0	26.2	31.3	21.2	17.5	26.5		27.4	31.6	28.3		
1952	29.1	27.3	30.1	22.5	26.2	32.6	25.5	19.8	37.2		27.2	32.1	28.9		
1953	31.6	29.1	31.9	28.4	29.6	33.5	27.6	20.6	44.6		29.1	35.6	33.8		
1954	29.9	27.6	31.7	26.5	27.3	33.9	24.2	18.1	39.3		29.0	32.9	29.2	25.2	52.7
1955	33.7	29.8	35.4	35.2	32.2	36.5	24.7	19.6	35.9		32.9	38.9	35.7	28.9	59.3
1956	35.1	31.6	36.7	28.9	33.9	38.8	27.1	22.7	35.1		34.4	39.9	35.8	30.2	62.7
1957	35.6	32.5	37.6	30.3	33.2	40.1	28.2	23.6	36.7		34.4	39.9	35.8	30.1	63.4
1958	33.3	31.0	37.2	24.1	31.3	41.3	25.2	19.9	36.8		33.6	35.9	30.1	29.9	58.8
1959	37.3	34.0	40.9	30.2	36.0	44.1	27.7	22.4	38.8		37.1	41.4	35.9	34.2	62.3
1960	38.1	35.1	42.4	34.6	36.2	45.5	28.5	23.0	39.9		37.4	42.0	36.3	34.8	63.1
1961	38.4	35.4	43.3	31.6	37.3	47.0	28.1	22.3	40.6		38.1	42.0	35.5	36.2	63.6
1962	41.6	38.4	46.2	38.3	40.5	49.2	31.3	24.3	46.9		40.4	45.8	39.4	39.2	65.8
1963	44.0	40.6	48.8	41.9	43.7	51.4	33.1	25.5	50.6		42.7	48.7	42.1	41.6	69.7
1964	47.0	42.9	51.5	43.9	47.7	54.0	35.0	28.5	49.0		45.5	52.6	45.9	45.2	72.5
1965	51.7	47.1	55.5	54.1	54.1	56.3	39.6	32.6	54.3		48.4	58.7	52.6	49.6	75.8
1966	56.3	51.6	58.4	53.9	59.6	59.0	46.1	37.8	63.7		51.4	63.9	57.9	53.6	80.6
1967	57.5	53.7	59.8	47.4	60.4	62.0	49.0	38.6	72.7		53.5	63.3	55.9	54.5	83.4
1968	60.7	56.3	63.4	56.4	64.7	64.5	50.4	40.3	72.9		56.6	67.5	59.2	59.9	87.2
1969	63.5	58.1	65.8	56.7	69.0	66.7	51.8	42.9	69.4		59.6	71.5	62.3	64.9	91.7
1970	61.4	56.0	65.0	47.7	66.9	67.8	48.1	41.3	58.7		58.7	69.0	56.5	65.2	96.2
1971	62.2	56.5	68.8	60.8	70.8	69.7	45.0	39.3	52.8		60.5	70.0	56.8	68.0	97.1
1972	68.3	61.3	74.3	65.6	81.0	74.2	49.3	44.8	51.3		67.6	77.2	64.2	74.9	100.8
1973	73.8	65.9	77.6	72.4	85.7	76.5	55.0	52.4	50.1		71.9	84.5	73.3	80.4	101.5
1974	72.7	65.7	75.2	62.6	79.3	76.5	56.8	54.7	49.4		69.4	82.8	71.2	80.8	98.8
1975	66.3	61.8	72.3	59.0	69.8	74.9	52.0	48.8	48.5		62.6	72.6	59.3	71.9	96.7
1976	72.4	66.2	79.4	73.2	78.2	80.4	53.8	50.6	49.2		69.0	81.2	68.4	81.4	99.0
1977	78.2	71.6	85.1	84.0	87.4	84.4	58.8	56.7	49.2		74.9	87.3	75.3	86.7	101.1
1978	82.6	76.1	88.4	86.3	91.2	87.8	64.2	63.1	49.5		79.1	91.8	81.4	89.7	102.2
1979	85.7	79.0	87.3	78.5	89.8	87.7	71.0	71.5	51.5		81.2	95.4	85.3	92.9	105.0
1980	84.1	80.0	85.3	59.5	85.1	89.1	74.6	73.5	57.4		77.0	91.3	79.3	88.7	106.2
1981	85.7	82.1	85.8	59.2	86.3	89.6	78.2	76.1	58.5		77.0	92.8	82.1	90.5	104.3
1982	81.9	80.8	84.5	57.5	78.1	89.7	77.0	72.9	65.7		75.1	85.1	73.4	82.1	100.7
1983	84.9	83.0	88.8	71.9	86.2	91.9	76.8	71.9	71.8		80.3	88.3	79.2	89.2	98.9
1984	92.8	91.0	92.8	86.6	94.6	93.4	89.2	85.4	78.9		86.2	96.6	92.1	93.0	103.8
1985	94.4	94.2	93.7	92.7	90.6	94.4	94.8	91.1	89.4		88.3	96.6	92.9	91.7	103.4
1986	95.3	95.7	96.8	95.2	93.9	97.6	94.5	93.2	96.0		92.0	95.9	93.7	94.4	99.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100.0	100.0	100.0	100.0
1988	105.4	105.6	104.0	105.9	104.1	103.7	107.6	111.8	98.0		104.4	105.6	109.0	103.0	101.8
1989	108.1	109.1	106.7	106.9	108.7	106.4	112.3	119.1	97.4		106.8	107.4	111.6	105.3	101.4
1990 ^{p}	109.1	110.9	107.3	102.3	109.5	107.6	115.5	123.0	97.4		107.6	107.7	111.7	105.9	101.9
1989: Jan	107.7	108.0	106.2	112.5	107.5	105.3	110.3	116.6	96.9		107.0	107.6	112.6	105.3	100.6
Feb	107.6	108.1	106.3	111.3	107.7	105.6	110.4	117.1	96.6		106.5	107.3	112.1	104.3	101.3
Mar	107.7	108.7	106.9	110.4	108.0	106.3	110.9	117.9	96.1		107.2	106.9	111.1	104.9	100.8
Apr	108.6	109.5	107.0	110.2	110.0	106.2	112.6	119.6	97.1		107.2	108.0	112.3	106.0	101.9
May	108.3	109.6	106.8	109.2	109.3	106.2	113.1	120.2	97.6		106.6	107.3	111.5	105.4	101.2
June	108.4	109.8	106.3	106.7	109.8	105.8	114.3	121.4	98.3		106.7	107.6	112.1	105.5	101.0
July	107.8	108.7	105.2	101.1	109.2	105.1	113.2	119.9	98.7		106.7	107.3	111.5	106.7	100.1
Aug	108.2	109.1	105.6	103.2	107.9	105.6	113.6	120.4	98.9		106.4	107.8	112.0	105.7	101.7
Sept	108.2	109.6	106.3	104.9	109.8	106.0	113.8	120.7	98.9		106.3	107.4	112.0	104.2	101.6
Oct	107.7	108.5	107.3	102.9	109.8	107.4	110.1	116.0	96.6		106.9	107.1	110.8	106.1	101.3
Nov	108.1	109.4	107.4	102.4	108.4	107.8	112.0	118.7	96.7		107.3	107.0	110.8	104.9	101.9
Dec	108.6	110.3	108.3	104.5	108.6	108.7	112.9	119.9	96.6		107.9	106.9	110.4	104.3	102.7
1990: Jan	107.5	108.5	106.0	85.2	110.6	107.8	111.8	118.0	97.5		108.0	106.2	109.4	105.4	101.2
Feb	108.5	109.7	107.0	99.3	111.6	107.2	113.3	120.1	97.6		108.4	107.1	110.8	105.8	101.7
Mar	108.9	110.7	107.5	109.3	112.0	106.6	114.9	122.2	97.5		108.2	107.1	110.9	105.2	102.0
Apr	108.8	110.4	107.2	102.4	111.2	107.1	114.7	121.6	97.3		108.0	107.3	110.9	106.1	101.8
May	109.4	111.2	107.4	107.0	111.1	106.9	116.2	123.5	97.6		108.3	107.7	112.5	105.2	101.1
June	110.1	111.7	107.8	112.2	112.0	106.6	116.8	124.4	97.6		108.3	108.8	113.8	106.1	102.1
July	110.4	111.7	107.5	106.7	109.5	107.3	117.2	125.0	97.8		108.4	109.6	114.0	107.8	103.3
Aug	110.5	111.9	107.8	104.6	109.6	107.9	117.2	125.4	97.7		107.9	109.7	114.9	106.8	103.0
Sept	110.6	112.6	108.7	111.8	109.3	108.2	117.8	126.4	97.3		107.4	109.4	114.1	106.9	103.0
Oct	109.8	112.1	108.4	106.9	106.9	108.8	117.0	125.3	97.3		106.8	108.2	112.4	106.2	102.2
Nov ^{p}	107.8	109.9	106.1	93.7	104.4	107.8	114.8	122.5	96.4		105.8	106.0	109.7	105.0	100.2
Dec ^{p}	107.1	109.6	106.1	87.4	104.3	108.6	114.2	121.4	96.9		105.1	104.9	107.2	104.4	101.3

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[1] Two components—oil and gas well drilling and manufactured homes—are included in total equipment, but not in detail shown.

Source: Board of Governors of the Federal Reserve System.

TABLE B–50.—*Industrial production indexes, selected manufactures, 1947–90*

[1987=100; monthly data seasonally adjusted]

Year or month	Durable manufactures								Nondurable manufactures				
	Primary metals		Fabricated metal products	Nonelectrical machinery	Electrical machinery	Transportation equipment		Lumber and products	Apparel products	Textile mill products	Printing and publishing	Chemicals and products	Foods
	Total	Iron and steel				Total	Motor vehicles and parts						
1989 proportion	*3.4*	*2.0*	*5.3*	*9.6*	*8.7*	*9.7*	*4.5*	*1.9*	*2.3*	*1.7*	*6.4*	*8.6*	*8.6*
1947	70.2	102.1	37.5	12.0	8.5	19.6	27.3	38.8	43.1	35.2	22.1	8.7	33.1
1948	73.0	106.8	38.2	12.1	8.8	21.4	29.6	40.4	45.0	37.7	23.2	9.4	32.8
1949	61.4	91.2	34.4	10.3	8.3	21.5	30.4	35.7	44.5	34.8	23.8	9.3	33.1
1950	77.3	112.4	42.2	11.6	11.3	25.7	39.0	43.4	47.9	39.6	24.9	11.6	34.3
1951	84.1	125.7	45.1	14.7	11.4	28.7	35.8	43.2	47.0	39.2	25.4	13.1	35.0
1952	76.8	110.6	44.0	16.0	13.0	33.3	30.7	42.7	49.5	38.9	25.3	13.7	35.7
1953	87.0	127.5	49.6	16.7	14.9	41.8	38.7	45.1	50.1	39.9	26.5	14.8	36.4
1954	70.4	99.1	44.7	14.2	13.3	36.4	33.3	44.8	49.5	37.3	27.6	15.0	37.2
1955	91.5	131.8	51.0	15.6	15.3	41.9	44.6	50.1	54.7	42.5	30.3	17.6	39.3
1956	90.9	129.3	51.8	17.9	16.5	40.6	36.2	49.5	56.0	43.7	32.3	18.9	41.5
1957	87.1	124.6	53.1	17.9	16.4	43.5	38.0	45.4	55.8	41.6	33.4	19.9	42.2
1958	69.0	93.9	47.6	15.0	15.0	34.3	28.0	46.1	54.3	41.1	32.6	20.6	43.2
1959	80.7	108.1	53.4	17.5	18.2	38.9	36.4	52.3	59.7	46.4	34.8	24.0	45.4
1960	80.4	109.9	53.4	17.6	19.8	40.3	41.1	49.3	60.9	45.6	36.2	24.9	46.6
1961	78.9	104.9	52.1	17.1	21.0	37.8	36.0	51.6	61.3	46.9	36.4	26.1	47.9
1962	84.6	109.3	56.7	19.2	24.1	43.7	43.9	54.4	63.8	50.1	37.7	29.0	49.5
1963	91.2	119.1	58.5	20.5	24.8	48.0	48.6	56.9	66.4	51.9	39.7	31.7	51.2
1964	102.9	135.5	62.1	23.3	26.2	49.2	49.9	61.1	68.7	56.0	42.1	34.8	53.6
1965	113.2	148.7	68.3	26.2	31.3	58.5	63.7	63.5	72.6	61.0	44.8	38.7	54.8
1966	120.2	153.1	73.1	30.5	37.5	62.7	62.6	65.9	74.5	64.7	48.3	42.2	56.9
1967	111.1	141.5	76.5	31.1	37.7	61.3	55.1	65.3	74.1	64.8	50.9	44.2	59.4
1968	115.1	146.1	80.6	31.3	39.8	66.6	66.0	67.2	76.0	72.3	51.7	49.6	61.0
1969	123.8	159.2	81.9	33.9	42.3	66.1	66.3	67.1	78.4	76.0	54.2	53.7	63.0
1970	115.2	148.2	75.9	32.8	40.5	55.5	53.3	66.7	75.3	74.4	52.7	55.9	64.0
1971	109.2	135.5	75.6	30.5	40.7	60.1	66.9	68.5	76.2	78.5	53.2	59.5	66.0
1972	122.4	150.6	82.9	35.4	46.5	64.1	73.0	78.4	80.9	86.0	56.7	66.9	69.5
1973	138.9	171.5	92.1	41.4	53.0	73.0	85.0	78.7	81.5	89.6	58.3	73.1	70.9
1974	134.5	166.1	88.4	44.1	52.4	66.4	73.4	71.4	77.9	81.5	57.4	75.8	71.9
1975	107.2	133.5	76.7	38.1	45.1	59.7	62.2	66.5	71.1	77.7	53.7	69.1	71.4
1976	119.9	147.1	84.9	40.0	50.7	68.0	81.9	75.6	83.9	86.3	58.7	77.3	75.5
1977	121.5	145.1	92.7	45.1	58.4	73.7	94.7	82.3	91.6	91.6	64.3	83.3	79.0
1978	130.7	155.3	96.2	50.2	64.0	79.5	99.2	83.6	93.9	92.0	68.1	88.0	81.8
1979	133.0	156.5	99.5	56.9	71.3	81.0	91.0	82.4	89.0	95.0	69.9	91.3	82.6
1980	110.8	126.0	92.5	60.6	73.3	72.3	67.0	76.9	89.2	92.1	70.3	87.8	84.6
1981	117.5	135.1	91.1	65.9	75.4	68.7	64.4	74.7	91.0	89.4	72.1	89.2	86.5
1982	83.2	86.2	83.2	63.9	75.9	64.8	58.8	67.3	90.1	83.0	75.2	81.8	87.7
1983	91.0	96.1	85.5	64.3	80.3	72.7	74.5	79.9	93.8	93.2	79.0	87.5	90.1
1984	102.4	105.9	93.3	80.8	94.1	83.1	90.6	86.0	95.7	93.7	84.5	91.4	92.1
1985	101.8	104.5	94.5	86.8	93.1	91.8	99.0	88.0	92.6	89.7	87.6	91.4	94.9
1986	93.8	90.8	93.8	90.4	94.3	96.9	98.5	95.1	96.3	93.9	90.7	94.6	97.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	110.3	113.8	106.2	113.8	106.5	105.0	105.5	104.6	102.2	99.8	103.6	105.4	102.8
1989	109.2	109.3	107.2	121.8	109.5	107.2	104.9	103.0	104.3	101.9	108.5	108.5	105.5
1990 ^{p}	108.2	109.6	105.9	126.8	111.6	105.4	96.8	101.7	98.9	100.8	111.9	110.1	107.6
1989: Jan	114.7	118.9	109.0	119.5	108.3	108.1	111.4	105.6	103.6	102.2	107.6	108.0	105.1
Feb	112.0	114.7	107.7	120.5	108.4	108.3	110.6	99.9	104.2	100.8	108.2	107.7	104.0
Mar	108.8	109.3	107.4	121.9	109.2	108.7	108.9	100.8	104.4	101.7	108.9	107.5	104.5
Apr	112.7	115.4	106.9	121.6	110.1	109.4	108.6	102.7	105.1	104.1	108.6	107.5	106.2
May	107.0	104.8	107.9	121.8	108.8	109.6	107.8	102.3	104.9	103.2	108.4	108.4	105.5
June	108.7	107.1	108.3	123.4	109.1	109.0	105.0	103.5	105.2	102.4	108.6	109.1	104.2
July	108.8	107.5	107.6	121.6	108.6	106.6	99.6	102.8	104.4	104.2	106.6	109.7	104.0
Aug	111.7	109.8	106.5	121.8	110.6	107.8	102.7	102.4	104.7	101.5	107.8	109.6	104.8
Sept	109.9	109.7	106.0	123.4	110.8	108.0	103.2	102.6	104.5	101.5	109.4	107.5	105.4
Oct	108.6	109.2	105.9	119.0	110.2	102.1	99.7	103.2	103.9	101.9	109.3	109.4	106.8
Nov	104.8	104.1	106.9	122.9	110.1	102.8	99.0	104.8	103.7	99.3	109.6	109.8	107.4
Dec	102.6	100.3	106.3	123.8	110.1	104.4	98.7	106.4	102.6	99.8	109.6	107.6	108.0
1990: Jan	105.0	104.6	105.1	123.7	110.1	94.7	76.8	106.0	102.4	100.6	110.7	109.9	106.8
Feb	107.9	110.6	105.6	124.2	111.0	103.5	94.1	104.3	102.1	103.0	112.1	110.5	107.4
Mar	105.4	106.1	105.5	125.2	112.3	107.9	103.5	105.0	99.8	99.8	111.4	109.5	107.1
Apr	106.4	106.7	105.0	125.7	111.3	105.1	95.8	103.3	98.7	100.9	112.0	110.3	107.0
May	106.2	105.5	107.1	126.9	112.4	109.0	104.0	101.7	99.2	102.7	112.8	109.2	106.8
June	109.5	110.3	106.7	127.5	112.8	111.0	108.0	102.0	99.3	103.6	112.0	110.3	106.1
July	110.3	110.6	107.7	128.3	112.2	109.3	102.7	103.6	99.2	102.9	111.4	110.4	107.1
Aug	114.6	118.3	107.9	128.8	112.5	107.9	101.0	100.5	98.8	100.4	110.9	111.1	107.7
Sept	111.6	113.9	106.8	128.5	112.5	111.1	107.5	100.3	98.4	100.7	111.6	110.9	107.6
Oct	108.3	109.8	105.9	127.8	110.8	109.1	103.7	97.5	97.2	100.1	112.6	110.6	108.5
Nov ^{p}	108.6	112.5	103.9	125.7	110.6	99.9	85.9	96.0	95.9	97.3	112.5	109.2	109.2
Dec ^{p}	102.5	103.1	102.7	123.9	110.9	95.7	77.6	96.0	95.8	96.4	112.5	108.8	109.9

Source: Board of Governors of the Federal Reserve System.

TABLE B-51.—*Capacity utilization rates, 1948–90*

[Percent; monthly data seasonally adjusted]

Year or month	Total industry	Manufacturing					Mining	Utilities
		Total	Durable goods	Non-durable goods	Primary processing	Advanced processing		
1948	......	82.5	......	......	87.3	80.0	......	......
1949	......	74.2	......	......	76.2	73.2	......	......
1950	......	82.8	......	......	88.5	79.8	......	......
1951	......	85.8	......	......	90.2	83.4	......	......
1952	......	85.4	......	......	84.9	85.9	......	......
1953	......	89.3	......	......	89.4	89.3	......	......
1954	......	80.1	......	......	80.6	80.0	......	......
1955	......	87.0	......	......	92.0	84.2	......	......
1956	......	86.1	......	......	89.4	84.4	......	......
1957	......	83.6	......	......	84.7	83.1	......	......
1958	......	75.0	......	......	75.4	74.9	......	......
1959	......	81.6	......	......	83.0	81.1	......	......
1960	......	80.1	......	......	79.8	80.5	......	......
1961	......	77.3	......	......	77.9	77.2	......	......
1962	......	81.4	......	......	81.5	81.6	......	......
1963	......	83.5	......	......	83.8	83.4	......	......
1964	......	85.6	......	......	87.8	84.6	......	......
1965	......	89.5	......	......	91.0	88.8	......	......
1966	......	91.1	......	......	91.4	91.1	......	......
1967	86.4	87.2	87.1	86.3	85.4	88.0	81.2	93.4
1968	86.8	87.2	86.8	86.6	86.3	87.4	83.5	94.1
1969	86.9	86.8	86.3	86.6	86.9	86.5	86.6	95.8
1970	80.8	79.7	76.7	82.9	80.4	79.1	88.9	95.4
1971	79.2	78.2	74.3	82.8	79.3	77.4	87.4	93.9
1972	84.3	83.7	80.9	86.6	86.4	82.5	90.4	94.6
1973	88.4	88.1	87.5	87.5	91.5	86.5	92.5	92.9
1974	84.2	83.8	82.7	84.0	86.0	82.8	92.5	86.8
1975	74.6	73.2	70.2	76.4	72.9	73.5	89.9	84.0
1976	79.3	78.5	75.4	81.8	80.1	77.8	90.0	84.8
1977	83.3	82.8	80.3	85.2	84.0	81.9	90.9	84.6
1978	85.5	85.1	83.5	86.2	86.3	84.3	91.3	84.8
1979	86.2	85.4	84.9	85.1	86.4	84.8	91.9	85.9
1980	82.1	80.2	78.6	81.4	78.0	81.3	94.0	85.5
1981	80.9	78.8	76.6	81.0	78.0	79.1	94.6	82.8
1982	75.0	72.8	69.0	78.0	69.0	74.6	86.5	79.5
1983	75.8	74.9	70.5	81.1	74.8	74.9	79.9	80.3
1984	81.1	80.4	78.3	83.1	80.4	80.3	84.4	82.5
1985	80.3	79.5	77.8	81.9	79.8	79.4	82.9	83.5
1986	79.2	79.0	76.1	83.0	80.8	78.2	78.2	80.2
1987	81.4	81.4	78.6	85.4	84.9	79.9	80.0	82.5
1988	84.0	83.9	82.5	86.0	87.8	82.3	84.6	84.2
1989	84.2	83.9	82.8	85.5	87.0	82.7	85.9	85.4
1990^p	82.9	82.2	81.0	83.8	84.7	81.1	89.0	85.1
1989: Jan	84.8	85.1	83.9	86.7	89.0	83.4	85.5	82.2
Feb	84.6	84.4	83.3	85.9	87.6	83.1	84.0	84.6
Mar	84.5	84.5	83.4	86.0	87.3	83.4	83.6	85.6
Apr	85.0	84.8	83.8	86.2	87.8	83.6	86.6	84.9
May	84.6	84.5	83.4	85.9	87.0	83.4	86.3	84.8
June	84.6	84.4	83.6	85.5	87.0	83.2	85.8	84.8
July	83.9	83.6	82.5	85.2	87.2	82.2	85.6	85.0
Aug	84.0	83.8	82.8	85.1	86.9	82.4	86.4	84.7
Sept	83.9	83.6	82.8	84.7	86.1	82.5	87.2	84.3
Oct	83.3	82.9	81.1	85.4	86.6	81.4	86.5	85.5
Nov	83.5	83.0	81.4	85.2	86.1	81.7	87.1	86.2
Dec	83.7	82.8	81.4	84.5	85.2	81.8	86.3	92.3
1990: Jan	82.7	82.0	79.9	84.9	85.7	80.5	87.8	84.8
Feb	83.2	83.0	81.3	85.3	86.1	81.7	87.3	82.5
Mar	83.4	82.9	81.9	84.2	85.2	82.0	87.5	84.2
Apr	83.1	82.5	81.2	84.2	85.0	81.5	89.2	84.5
May	83.4	82.8	82.1	83.9	84.9	82.0	88.7	84.7
June	83.7	83.0	82.4	83.8	85.5	81.9	88.8	86.8
July	83.8	83.0	82.2	84.0	86.0	81.7	90.5	86.6
Aug	83.6	82.8	82.1	83.7	85.9	81.4	89.2	87.9
Sept	83.5	82.7	82.0	83.5	84.9	81.7	90.6	87.0
Oct	82.7	81.9	80.8	83.4	83.9	81.1	89.4	85.8
Nov^p	81.0	80.2	78.7	82.3	82.3	79.3	89.2	82.7
Dec ^{p}	80.4	79.3	77.3	82.0	80.9	78.6	89.9	84.2

Source: Board of Governors of the Federal Reserve System.

TABLE B-52.—*New construction activity, 1929–90*

[Value put in place, billions of dollars; monthly data at seasonally adjusted annual rates]

Year or month	Total new construction	Private construction							Public construction		
		Total	Residential buildings [1]		Nonresidential buildings and other construction [1]				Total	Federal	State and local [5]
			Total [2]	New housing units	Total	Commercial [3]	Industrial	Other [4]			
1929	10.8	8.3	3.6	3.0	4.7	1.1	0.9	2.6	2.5	0.2	2.3
1933	2.9	1.2	.5	.3	.8	.1	.2	.5	1.6	.5	1.1
1939	8.2	4.4	2.7	2.3	1.7	.3	.3	1.2	3.8	.8	3.1
1940	8.7	5.1	3.0	2.6	2.1	.3	.4	1.3	3.6	1.2	2.4
1941	12.0	6.2	3.5	3.0	2.7	.4	.8	1.5	5.8	3.8	2.0
1942	14.1	3.4	1.7	1.4	1.7	.2	.3	1.2	10.7	9.3	1.3
1943	8.3	2.0	.9	.7	1.1	.0	.2	.9	6.3	5.6	.7
1944	5.3	2.2	.8	.6	1.4	.1	.2	1.1	3.1	2.5	.6
1945	5.8	3.4	1.3	.7	2.1	.2	.6	1.3	2.4	1.7	.7
1946	14.3	12.1	6.2	4.8	5.8	1.2	1.7	3.0	2.2	.9	1.4
New series											
1947	20.0	16.7	9.9	7.8	6.9	1.0	1.7	4.2	3.3	.8	2.5
1948	26.1	21.4	13.1	10.5	8.2	1.4	1.4	5.5	4.7	1.2	3.5
1949	26.7	20.5	12.4	10.0	8.0	1.2	1.0	5.9	6.3	1.5	4.8
1950	33.6	26.7	18.1	15.6	8.6	1.4	1.1	6.1	6.9	1.6	5.2
1951	35.4	26.2	15.9	13.2	10.3	1.5	2.1	6.7	9.3	3.0	6.3
1952	36.8	26.0	15.8	12.9	10.2	1.1	2.3	6.8	10.8	4.2	6.6
1953	39.1	27.9	16.6	13.4	11.3	1.8	2.2	7.3	11.2	4.1	7.1
1954	41.4	29.7	18.2	14.9	11.5	2.2	2.0	7.2	11.7	3.4	8.3
1955	46.5	34.8	21.9	18.2	12.9	3.2	2.4	7.3	11.7	2.8	8.9
1956	47.6	34.9	20.2	16.1	14.7	3.6	3.1	8.0	12.7	2.7	10.0
1957	49.1	35.1	19.0	14.7	16.1	3.6	3.6	9.0	14.1	3.0	11.1
1958	50.0	34.6	19.8	15.4	14.8	3.6	2.4	8.8	15.5	3.4	12.1
1959	55.4	39.3	24.3	19.2	15.1	3.9	2.1	9.0	16.1	3.7	12.3
1960	54.7	38.9	23.0	17.3	15.9	4.2	2.9	8.9	15.9	3.6	12.2
1961	56.4	39.3	23.1	17.1	16.2	4.7	2.8	8.7	17.1	3.9	13.3
1962	60.2	42.3	25.2	19.4	17.2	5.1	2.8	9.2	17.9	3.9	14.0
1963	64.8	45.5	27.9	21.7	17.6	5.0	2.9	9.7	19.4	4.0	15.4
New series											
1964	72.1	51.9	30.5	24.1	21.4	6.8	3.6	11.0	20.2	3.7	16.5
1965	78.0	56.1	30.2	23.8	25.8	8.1	5.1	12.6	21.9	3.9	18.0
1966	81.2	57.4	28.6	21.8	28.8	8.1	6.6	14.1	23.8	3.8	20.0
1967	83.0	57.6	28.7	21.5	28.8	8.0	6.0	14.9	25.4	3.3	22.1
1968	92.4	65.0	34.2	26.7	30.8	9.0	6.0	15.9	27.4	3.2	24.2
1969	99.8	72.0	37.2	29.2	34.8	10.7	6.8	17.3	27.8	3.2	24.6
1970	100.7	72.8	35.9	27.1	36.9	11.1	6.5	19.3	27.9	3.1	24.8
1971	117.3	87.6	48.5	38.7	39.1	13.0	5.4	20.7	29.7	3.8	25.9
1972	133.2	103.2	60.7	50.1	42.5	15.4	4.7	22.4	30.0	4.2	25.8
1973	146.6	114.3	65.1	54.6	49.2	17.7	6.2	25.3	32.3	4.7	27.6
1974	147.0	108.9	56.0	43.4	52.9	17.6	7.9	27.5	38.1	5.1	33.0
1975	145.5	102.2	51.6	36.3	50.6	13.9	8.0	28.7	43.3	6.1	37.2
1976	165.6	121.6	68.3	50.8	53.4	13.7	7.2	32.5	44.0	6.8	37.2
1977	191.2	148.1	92.0	72.2	56.1	15.7	7.7	32.7	43.1	7.1	36.0
1978	227.9	177.8	109.8	85.6	67.9	19.7	11.0	37.2	50.1	8.1	42.0
1979	256.9	200.3	116.4	89.3	83.8	27.1	15.0	41.8	56.6	8.6	48.1
1980	256.5	192.8	100.4	69.6	92.4	32.9	13.8	45.7	63.6	9.6	54.0
1981	267.7	203.0	99.2	69.4	103.7	38.0	17.0	48.7	64.7	10.4	54.3
1982	255.7	192.6	84.7	57.0	108.0	41.4	17.3	49.2	63.1	10.0	53.1
1983	290.9	227.5	125.5	94.6	102.0	41.0	12.9	48.1	63.5	10.6	52.9
1984	340.7	270.5	153.8	113.8	116.6	54.9	13.7	48.0	70.2	11.2	59.0
1985	368.7	290.9	158.5	114.7	132.4	66.9	15.8	49.7	77.8	12.0	65.8
1986	398.2	313.6	187.1	133.2	126.5	64.2	13.7	48.5	84.6	12.4	72.2
1987	410.2	319.6	194.7	139.9	125.0	62.8	13.7	48.5	90.6	14.1	76.5
1988	422.1	327.1	198.1	138.9	129.0	64.9	14.9	49.2	95.0	12.3	82.7
1989	432.1	333.5	196.6	139.2	137.0	67.0	18.5	51.5	98.6	12.3	86.3
1990[p]	434.9	325.1	187.4	129.8	137.7	63.1	20.6	54.0	109.8	14.0	95.9

See next page for continuation of table.

TABLE B–52.—*New construction activity, 1929–90*—Continued

[Value put in place, billions of dollars; monthly data at seasonally adjusted annual rates]

Year or month	Total new construction	Private construction							Public construction		
		Total	Residential buildings[1]		Nonresidential buildings and other construction[1]				Total	Federal	State and local[5]
			Total[2]	New housing units	Total	Commercial[3]	Industrial	Other[4]			
1989: Jan	438.7	340.9	203.2	144.4	137.7	68.4	17.6	51.7	97.7	9.9	87.8
Feb	432.6	335.6	201.0	144.9	134.5	66.9	16.4	51.2	97.0	11.1	85.9
Mar	432.7	339.8	202.4	143.2	137.3	69.0	17.1	51.3	93.0	12.5	80.4
Apr	431.5	335.8	202.3	143.1	133.5	64.6	18.4	50.5	95.7	10.7	85.0
May	434.7	333.8	199.4	140.7	134.4	65.3	17.9	51.2	100.9	14.7	86.2
June	431.6	333.8	197.1	139.6	136.8	67.0	18.8	51.0	97.8	13.7	84.1
July	429.0	333.3	196.8	139.6	136.5	66.7	18.5	51.3	95.7	11.7	84.0
Aug	433.9	335.0	195.6	138.2	139.4	67.9	19.4	52.1	99.0	13.0	86.0
Sept	433.4	332.1	193.0	135.8	139.1	67.3	20.0	51.9	101.3	14.9	86.5
Oct	429.3	332.1	192.1	134.8	140.0	69.5	19.2	51.4	97.1	10.3	86.9
Nov	433.4	329.8	190.9	135.2	139.0	67.7	19.1	52.2	103.5	12.2	91.4
Dec	432.0	325.0	189.6	135.3	135.4	64.5	18.9	52.0	107.0	12.9	94.1
1990: Jan	446.0	338.1	200.1	140.0	137.9	65.3	19.7	52.9	107.9	13.6	94.3
Feb	455.6	343.1	203.0	144.6	140.1	67.1	21.1	51.9	112.5	14.0	98.4
Mar	457.3	347.4	206.9	145.3	140.5	66.1	21.1	53.3	109.9	15.6	94.3
Apr	444.7	338.8	200.2	140.0	138.5	64.5	21.0	53.0	106.0	16.2	89.8
May	443.8	334.0	196.1	136.6	137.9	63.7	20.8	53.4	109.8	15.7	94.1
June	441.1	329.6	189.5	130.5	140.1	65.4	20.4	54.3	111.5	16.7	94.8
July	437.0	331.3	187.1	129.2	144.2	65.8	23.6	54.7	105.7	13.5	92.2
Aug	436.3	323.5	184.4	127.0	139.1	63.9	20.2	55.0	112.8	13.5	99.3
Sept	423.9	317.5	179.7	123.3	137.8	62.2	19.9	55.8	106.4	12.3	94.1
Oct	423.3	311.4	176.8	121.4	134.6	60.0	19.6	55.0	111.9	12.0	100.0
Nov [p]	417.1	303.2	171.5	117.3	131.8	57.2	19.5	55.0	113.9	12.7	101.2
Dec [p]	415.1	300.0	167.5	114.2	132.4	57.8	20.9	53.7	115.2	12.8	102.4

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[1] Beginning 1960, farm residential buildings included in residential buildings; prior to 1960, included in nonresidential buildings and other construction.

[2] Includes residential improvements, not shown separately. Prior to 1964, also includes nonhousekeeping units (hotels, motels, etc.).

[3] Office buildings, warehouses, stores, restaurants, garages, etc., and, beginning 1964, hotels and motels; prior to 1964 hotels and motels are included in total residential.

[4] Religious, educational, hospital and institutional, miscellaneous nonresidential, farm (see also footnote 1), public utilities, telecommunications, and all other private.

[5] Includes Federal grants-in-aid for State and local projects.

Source: Department of Commerce, Bureau of the Census.

Table B-53.—*New housing units started and authorized, 1959–90*

[Thousands of units]

Year or month	New housing units started						New private housing units authorized [2]			
	Private and public [1]		Private (farm and nonfarm) [1]				Total	Type of structure		
	Total (farm and nonfarm)	Nonfarm	Total	Type of structure				1 unit	2 to 4 units	5 units or more
				1 unit	2 to 4 units	5 units or more				
1959	1,553.7	1,531.3	1,517.0	1,234.0	283.0		1,208.3	938.3	77.1	192.9
1960	1,296.1	1,274.0	1,252.2	994.7	257.4		998.0	746.1	64.6	187.4
1961	1,365.0	1,336.8	1,313.0	974.3	338.7		1,064.2	722.8	67.6	273.8
1962	1,492.5	1,468.7	1,462.9	991.4	471.5		1,186.6	716.2	87.1	383.3
1963	1,634.9	1,614.8	1,603.2	1,012.4	590.8		1,334.7	750.2	118.9	465.6
1964	1,561.0	1,534.0	1,528.8	970.5	108.4	450.0	1,285.8	720.1	100.8	464.9
1965	1,509.7	1,487.5	1,472.8	963.7	86.6	422.5	1,239.8	709.9	84.8	445.1
1966	1,195.8	1,172.8	1,164.9	778.6	61.1	325.1	971.9	563.2	61.0	347.7
1967	1,321.9	1,298.8	1,291.6	843.9	71.6	376.1	1,141.0	650.6	73.0	417.5
1968	1,545.4	1,521.4	1,507.6	899.4	80.9	527.3	1,353.4	694.7	84.3	574.4
1969	1,499.5	1,482.3	1,466.8	810.6	85.0	571.2	1,323.7	625.9	85.2	612.7
1970	1,469.0	(3)	1,433.6	812.9	84.8	535.9	1,351.5	646.8	88.1	616.7
1971	2,084.5	(3)	2,052.2	1,151.0	120.3	780.9	1,924.6	906.1	132.9	885.7
1972	2,378.5	(3)	2,356.6	1,309.2	141.3	906.2	2,218.9	1,033.1	148.6	1,037.2
1973	2,057.5	(3)	2,045.3	1,132.0	118.3	795.0	1,819.5	882.1	117.0	820.5
1974	1,352.5	(3)	1,337.7	888.1	68.1	381.6	1,074.4	643.8	64.3	366.2
1975	1,171.4	(3)	1,160.4	892.2	64.0	204.3	939.2	675.5	63.9	199.8
1976	1,547.6	(3)	1,537.5	1,162.4	85.9	289.2	1,296.2	893.6	93.1	309.5
1977	2,001.7	(3)	1,987.1	1,450.9	121.7	414.4	1,690.0	1,126.1	121.3	442.7
1978	2,036.1	(3)	2,020.3	1,433.3	125.0	462.0	1,800.5	1,182.6	130.6	487.3
1979	1,760.0	(3)	1,745.1	1,194.1	122.0	429.0	1,551.8	981.5	125.4	444.8
1980	1,312.6	(3)	1,292.2	852.2	109.5	330.5	1,190.6	710.4	114.5	365.7
1981	1,100.3	(3)	1,084.2	705.4	91.1	287.7	985.5	564.3	101.8	319.4
1982	1,072.1	(3)	1,062.2	662.6	80.0	319.6	1,000.5	546.4	88.3	365.8
1983	1,712.5	(3)	1,703.0	1,067.6	113.5	522.0	1,605.2	901.5	133.6	570.1
1984	1,755.8	(3)	1,749.5	1,084.2	121.4	544.0	1,681.8	922.4	142.6	616.8
1985	1,745.0	(3)	1,741.8	1,072.4	93.4	576.1	1,733.3	956.6	120.1	656.6
1986	1,807.1	(3)	1,805.4	1,179.4	84.0	542.0	1,769.4	1,077.6	108.4	583.5
1987	1,622.7	(3)	1,620.5	1,146.4	65.3	408.7	1,534.8	1,024.4	89.3	421.1
1988	(4)	(3)	1,488.1	1,081.3	58.8	348.0	1,455.6	993.8	75.7	386.1
1989	(4)	(3)	1,376.1	1,003.3	55.2	317.6	1,338.4	931.7	67.0	339.8
1990 [p]	(4)	(3)	1,192.8	894.5	37.0	261.3	1,104.4	798.9	53.4	252.2
			Seasonally adjusted annual rates							
1989: Jan	(4)	(3)	1,659	1,188	66	405	1,455	1,026	69	360
Feb	(4)	(3)	1,454	1,026	60	368	1,388	966	84	338
Mar	(4)	(3)	1,405	979	51	375	1,256	884	66	306
Apr	(4)	(3)	1,341	1,028	62	251	1,355	937	68	350
May	(4)	(3)	1,308	977	43	288	1,352	900	70	382
June	(4)	(3)	1,414	971	55	388	1,323	877	63	383
July	(4)	(3)	1,424	1,029	58	337	1,281	910	68	303
Aug	(4)	(3)	1,325	987	54	284	1,334	933	[illegible]	331
Sept	(4)	(3)	1,263	969	56	238	1,310	946	63	301
Oct	(4)	(3)	1,423	1,023	60	340	1,362	959	61	342
Nov	(4)	(3)	1,347	1,010	47	290	1,364	984	62	318
Dec	(4)	(3)	1,273	931	53	289	1,416	984	65	367
1990: Jan	(4)	(3)	1,568	1,099	53	416	1,739	985	91	663
Feb	(4)	(3)	1,488	1,154	42	292	1,297	974	67	256
Mar	(4)	(3)	1,307	996	35	276	1,232	912	57	263
Apr	(4)	(3)	1,216	898	53	265	1,108	813	57	238
May	(4)	(3)	1,206	897	36	273	1,065	802	51	212
June	(4)	(3)	1,189	889	42	258	1,108	796	48	264
July	(4)	(3)	1,153	875	29	249	1,082	780	58	244
Aug	(4)	(3)	1,131	836	30	265	1,050	762	56	232
Sept	(4)	(3)	1,106	859	34	213	992	737	49	206
Oct	(4)	(3)	1,026	839	22	165	920	708	43	169
Nov [p]	(4)	(3)	1,127	768	44	315	906	671	42	193
Dec [p]	(4)	(3)	987	755	19	213	844	645	43	156

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[1] Units in structures built by private developers for sale upon completion to local public housing authorities under the Department of Housing and Urban Development "Turnkey" program are classified as private housing. Military housing starts, including those financed with mortgages insured by FHA under Section 803 of the National Housing Act, are included in publicly owned starts and excluded from total private starts.

[2] Authorized by issuance of local building permit: in 17,000 permit-issuing places beginning 1984; in 16,000 places for 1978–83; in 14,000 places for 1972–77; in 13,000 places for 1967–71; in 12,000 places for 1963–66; and in 10,000 places prior to 1963.

[3] Not available separately beginning January 1970.

[4] Series discontinued December 1988.

Source: Department of Commerce, Bureau of the Census.

TABLE B–54.—*Business expenditures for new plant and equipment, 1947–91*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Industries surveyed quarterly									Addenda				
	All industries	Manufacturing			Nonmanufacturing					Total nonfarm business [2]	Manufacturing	Nonmanufacturing		
		Total	Durable goods	Nondurable goods	Total [1]	Mining	Transportation	Public utilities	Commercial and other			Total	Surveyed quarterly	Surveyed annually [3]
1947	20.11	8.73	3.39	5.34	11.38	0.69	2.69	1.64	6.38	22.27	8.73	13.54	11.38	2.16
1948	22.78	9.25	3.54	5.71	13.53	.93	3.17	2.67	6.77	25.97	9.25	16.73	13.53	3.19
1949	20.28	7.32	2.67	4.64	12.96	.88	2.80	3.28	6.01	24.03	7.32	16.72	12.96	3.76
1950	21.56	7.73	3.22	4.51	13.83	.84	2.87	3.42	6.70	25.81	7.73	18.08	13.83	4.25
1951	26.81	11.07	5.12	5.95	15.74	1.11	3.60	3.75	7.29	31.38	11.07	20.31	15.74	4.57
1952	28.16	12.12	5.75	6.37	16.04	1.21	3.56	3.96	7.31	32.16	12.12	20.04	16.04	4.00
1953	29.96	12.43	5.71	6.72	17.53	1.25	3.58	4.61	8.09	34.20	12.43	21.77	17.53	4.23
1954	28.86	12.00	5.49	6.51	16.85	1.29	2.91	4.23	8.42	33.62	12.00	21.62	16.85	4.76
1955	30.94	12.50	5.87	6.62	18.44	1.31	3.10	4.26	9.77	37.08	12.50	24.58	18.44	6.14
1956	37.90	16.33	8.19	8.15	21.57	1.64	3.56	4.78	11.59	45.25	16.33	28.91	21.57	7.35
1957	40.54	17.50	8.59	8.91	23.04	1.69	3.84	5.95	11.56	48.62	17.50	31.11	23.04	8.08
1958	33.84	12.98	6.21	6.77	20.86	1.43	2.72	5.74	10.97	42.55	12.98	29.57	20.86	8.72
1959	35.88	13.76	6.72	7.04	22.12	1.35	3.47	5.46	11.84	45.17	13.76	31.41	22.12	9.29
1960	39.44	16.36	8.28	8.08	23.08	1.29	3.54	5.40	12.86	48.99	16.36	32.63	23.08	9.55
1961	38.34	15.53	7.43	8.10	22.80	1.26	3.14	5.20	13.21	48.14	15.53	32.60	22.80	9.80
1962	40.86	16.03	7.81	8.22	24.83	1.41	3.59	5.12	14.71	51.61	16.03	35.58	24.83	10.75
1963	43.67	17.27	8.64	8.63	26.40	1.26	3.64	5.33	16.17	53.59	17.27	36.33	26.40	9.93
1964	51.26	21.23	10.98	10.25	30.04	1.33	4.71	5.80	18.20	62.02	21.23	40.80	30.04	10.76
1965	59.52	25.41	13.49	11.92	34.12	1.36	5.66	6.49	20.60	70.79	25.41	45.39	34.12	11.27
1966	70.40	31.37	17.23	14.15	39.03	1.42	6.68	7.82	23.11	82.62	31.37	51.25	39.03	12.22
1967	72.75	32.25	17.83	14.42	40.50	1.38	6.57	9.33	23.22	83.82	32.25	51.57	40.50	11.07
1968	76.42	32.34	17.93	14.40	44.08	1.44	6.91	10.52	25.22	88.92	32.34	56.58	44.08	12.50
1969	85.74	36.27	19.97	16.31	49.47	1.77	7.23	11.70	28.77	100.02	36.27	63.74	49.47	14.27
1970	91.91	36.99	19.80	17.19	54.92	2.02	7.17	13.03	32.71	106.15	36.99	69.16	54.92	14.24
1971	92.91	33.60	16.78	16.82	59.31	2.67	6.42	14.70	35.52	109.18	33.60	75.58	59.31	16.26
1972	103.40	35.42	18.22	17.20	67.98	2.88	7.14	16.26	41.69	120.91	35.42	85.49	67.98	17.51
1973	120.03	42.35	22.63	19.72	77.67	3.30	8.00	17.99	48.39	139.26	42.35	96.91	77.67	19.24
1974	139.67	52.48	26.77	25.71	87.19	4.58	9.16	19.96	53.49	159.83	52.48	107.35	87.19	20.16
1975	142.42	53.66	25.37	28.28	88.76	6.12	9.95	20.23	52.47	162.60	53.66	108.95	88.76	20.19
1976	158.44	58.53	27.50	31.03	99.91	7.63	11.10	22.90	58.29	179.91	58.53	121.38	99.91	21.47
1977	184.82	67.48	32.77	34.71	117.34	9.81	12.20	27.83	67.51	208.15	67.48	140.67	117.34	23.33
1978	216.81	78.13	39.02	39.10	138.69	10.55	12.07	32.10	83.96	244.40	78.13	166.27	138.69	27.58
1979	255.26	95.13	47.72	47.41	160.13	11.05	13.91	37.53	97.64	285.24	95.13	190.11	160.13	29.98
1980	286.40	112.60	54.82	57.77	173.80	12.71	13.56	41.32	106.21	318.08	112.60	205.48	173.80	31.68
1981	324.73	128.68	58.93	69.75	196.06	15.81	12.67	47.17	120.41	358.77	128.68	230.09	196.06	34.04
1982	326.19	123.97	54.58	69.39	202.22	14.11	11.75	53.58	122.79	363.08	123.97	239.11	202.22	36.89
1983	321.16	117.35	51.61	65.74	203.82	10.64	10.81	52.95	129.41	359.73	117.35	242.38	203.82	38.56
1984	373.83	139.61	64.57	75.04	234.22	11.86	13.44	57.53	151.39	418.38	139.61	278.77	234.22	44.55
1985	410.12	152.88	70.87	82.01	257.24	12.00	14.57	59.58	171.09	454.93	152.88	302.05	257.24	44.81
1986	399.36	137.95	65.68	72.28	261.40	8.15	15.05	56.61	181.59	447.11	137.95	309.16	261.40	47.75
1987	410.52	141.06	68.03	73.03	269.46	8.28	15.07	56.26	189.84	461.51	141.06	320.45	269.46	50.99
1988	455.49	163.45	77.04	86.41	292.04	9.29	16.63	60.37	205.76	508.22	163.45	344.77	292.04	52.73
1989	507.40	183.80	82.56	101.24	323.60	9.21	18.84	66.28	229.28	563.93	183.80	380.13	323.60	56.53
1990 [4]	533.91	192.29	83.70	108.60	341.62	9.81	21.46	66.97	243.39	....	192.29	....	341.62	....
1991 [4]	546.67	193.58	83.01	110.57	353.09	9.38	23.79	67.88	252.04	....	193.58	....	353.09	....
1989: I	487.43	172.73	80.20	92.53	314.70	8.94	17.84	66.09	221.82	....	172.73	....	314.70	....
II	502.05	180.91	82.44	98.47	321.14	9.24	18.42	68.09	225.39	....	180.91	....	321.14	....
III	514.95	185.99	83.60	102.40	328.96	9.24	21.03	65.19	233.50	....	185.99	....	328.96	....
IV	519.58	191.88	83.41	108.47	327.70	9.38	18.25	65.82	234.25	....	191.88	....	327.70	....
1990: I	532.45	191.36	86.35	105.02	341.09	9.58	22.13	65.72	243.66	....	191.36	....	341.09	....
II	535.49	195.16	84.34	110.82	340.33	9.84	21.86	64.27	244.37	....	195.16	....	340.33	....
III	534.86	194.48	82.67	111.81	340.39	9.98	21.41	67.48	241.51	....	194.48	....	340.39	....
IV [4]	532.84	188.16	81.42	106.74	344.67	9.84	20.42	70.40	244.02	....	188.16	....	344.67	....
1991: I [4]	557.92	191.08	82.79	108.28	366.84	10.24	23.75	71.76	261.08	....	191.08	....	366.84	....
II [4]	561.85	198.76	85.09	113.67	363.09	9.78	23.99	70.21	259.12	....	198.76	....	363.09	....

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[1] Excludes forestry, fisheries, and agricultural services; professional services; social services and membership organizations; and real estate, which, effective with the April–May 1984 survey, are no longer surveyed quarterly. See last column ("nonmanufacturing surveyed annually") for data for these industries.

[2] "All industries" plus the part of nonmanufacturing that is surveyed annually.

[3] Consists of forestry, fisheries, and agricultural services; professional services; social services and membership organizations; and real estate.

[4] Planned capital expenditures as reported by business in October and November 1990, corrected for biases.

Source: Department of Commerce, Bureau of the Census.

TABLE B–55.—*Manufacturing and trade sales and inventories, 1948–90*

[Amounts in millions of dollars; monthly data seasonally adjusted]

Year or month	Total manufacturing and trade			Manufacturing			Merchant wholesalers			Retail trade		
	Sales [1]	Inventories [2]	Ratio [3]	Sales [1]	Inventories [2]	Ratio [3]	Sales [1]	Inventories [2]	Ratio [3]	Sales [1]	Inventories [2]	Ratio [3]
1948	35,260	52,507	1.42	17,316	28,543	1.57	6,808	7,957	1.13	11,135	16,007	1.39
1949	33,788	49,497	1.53	16,126	26,321	1.75	6,514	7,706	1.19	11,149	15,470	1.41
1950	38,596	59,822	1.36	18,634	31,078	1.48	7,695	9,284	1.07	12,268	19,460	1.38
1951	43,356	70,242	1.55	21,714	39,306	1.66	8,597	9,886	1.16	13,046	21,050	1.64
1952	44,840	72,377	1.58	22,529	41,136	1.78	8,782	10,210	1.12	13,529	21,031	1.52
1953	47,987	76,122	1.58	24,843	43,948	1.76	9,052	10,686	1.17	14,091	21,488	1.53
1954	46,443	73,175	1.60	23,355	41,612	1.81	8,993	10,637	1.18	14,095	20,926	1.51
1955	51,694	79,516	1.47	26,480	45,069	1.62	9,893	11,678	1.13	15,321	22,769	1.43
1956	54,063	87,304	1.55	27,740	50,642	1.73	10,513	13,260	1.19	15,811	23,402	1.47
1957	55,879	89,052	1.59	28,736	51,871	1.80	10,475	12,730	1.23	16,667	24,451	1.44
1958	54,201	87,132	1.61	27,247	50,280	1.85	10,257	12,739	1.24	16,696	24,113	1.44
1959	59,729	92,166	1.54	30,286	52,982	1.75	11,491	13,879	1.21	17,951	25,305	1.41
1960	60,827	94,756	1.56	30,879	53,823	1.74	11,656	14,120	1.21	18,294	26,813	1.47
1961	61,159	95,628	1.56	30,923	54,919	1.78	11,988	14,488	1.21	18,249	26,221	1.44
1962	65,662	101,091	1.54	33,357	58,214	1.75	12,674	14,936	1.18	19,630	27,941	1.42
1963	68,995	105,515	1.53	35,058	60,081	1.71	13,382	16,048	1.20	20,556	29,386	1.43
1964	73,682	111,534	1.51	37,331	63,440	1.70	14,529	17,000	1.17	21,823	31,094	1.42
1965	80,283	120,947	1.51	40,995	68,225	1.66	15,611	18,317	1.17	23,677	34,405	1.45
1966	87,187	136,838	1.57	44,870	78,000	1.74	16,987	20,765	1.22	25,330	38,073	1.50
1967	90,765	144,866	1.60	46,487	84,662	1.82	19,520	24,955	1.28	24,758	35,249	1.42
1968	98,607	155,770	1.58	50,228	90,617	1.80	20,926	26,268	1.26	27,453	38,885	1.42
1969	105,585	169,419	1.60	53,501	98,202	1.84	22,694	28,762	1.27	29,390	42,455	1.44
1970	108,100	177,492	1.64	52,805	101,652	1.93	24,031	32,199	1.34	31,264	43,641	1.40
1971	116,769	187,724	1.61	55,906	102,658	1.84	26,350	35,210	1.34	34,513	49,856	1.44
1972	130,931	201,865	1.54	63,027	108,240	1.72	29,695	38,816	1.31	38,209	54,809	1.43
1973	153,762	233,175	1.52	72,931	124,630	1.71	38,173	45,556	1.19	42,658	62,989	1.48
1974	177,946	285,884	1.61	84,790	157,793	1.86	47,989	57,239	1.19	45,167	70,852	1.57
1975	182,402	288,414	1.58	86,589	159,932	1.85	46,803	56,972	1.22	49,010	71,510	1.46
1976	204,381	318,647	1.56	98,797	175,195	1.77	50,885	64,365	1.26	54,699	79,087	1.45
1977	229,773	351,164	1.53	113,202	189,214	1.67	56,364	72,801	1.29	60,207	89,149	1.48
1978	260,592	399,220	1.53	126,905	210,509	1.66	66,669	86,405	1.30	67,018	102,306	1.53
1979	298,144	451,166	1.51	143,936	241,100	1.68	79,472	99,262	1.25	74,737	110,804	1.48
1980	327,874	508,327	1.55	154,391	264,281	1.71	93,704	122,979	1.31	79,779	121,067	1.52
1981	356,700	545,613	1.49	168,129	282,645	1.65	102,013	130,275	1.25	86,558	132,693	1.48
1982	348,754	574,516	1.67	163,350	311,827	1.95	96,290	128,196	1.35	89,114	134,493	1.49
1983	369,136	591,265	1.56	171,242	312,647	1.80	100,324	130,906	1.27	97,570	147,712	1.44
1984	408,578	646,072	1.53	187,869	334,767	1.74	113,393	143,557	1.22	107,316	167,748	1.49
1985	419,283	657,753	1.56	190,016	327,496	1.74	114,626	148,484	1.28	114,642	181,773	1.52
1986	425,371	657,482	1.55	188,360	316,182	1.70	116,151	154,713	1.31	120,860	186,587	1.56
1987	451,933	704,515	1.51	199,170	331,132	1.62	124,254	165,271	1.28	128,509	208,112	1.55
1988	490,309	754,267	1.49	217,632	354,163	1.58	135,176	180,313	1.30	137,500	219,791	1.55
1989	521,934	795,415	1.50	231,780	371,082	1.58	145,683	188,819	1.27	144,471	235,514	1.59
1989: Jan	516,956	761,320	1.47	231,485	357,458	1.54	143,378	181,869	1.27	142,093	221,993	1.56
Feb	512,331	765,010	1.49	228,353	359,056	1.57	142,799	181,935	1.27	141,179	224,019	1.59
Mar	512,810	767,304	1.50	228,048	361,130	1.58	143,548	181,615	1.27	141,214	224,559	1.59
Apr	523,494	772,908	1.48	234,042	363,458	1.55	145,708	182,832	1.25	143,744	226,618	1.58
May	523,520	779,084	1.49	233,071	365,055	1.57	145,823	184,224	1.26	144,626	229,805	1.59
June	520,510	782,637	1.50	231,236	366,492	1.58	145,064	185,146	1.28	144,210	230,999	1.60
July	516,154	788,618	1.53	225,922	370,803	1.64	145,062	186.024	1.28	145,170	231,791	1.60
Aug	531,579	791,363	1.49	238,150	371,489	1.56	146,698	185,944	1.27	146,731	233,930	1.59
Sept	527,785	789,416	1.50	233,562	370,890	1.59	147,066	185,003	1.26	147,157	233,523	1.59
Oct	526,075	794,019	1.51	231,995	371,712	1.60	148,784	187,945	1.26	145,296	234,362	1.61
Nov	528,186	797,611	1.51	232,826	372,813	1.60	148,893	188,904	1.27	146,467	235,894	1.61
Dec	526,435	795,415	1.51	231,003	371,082	1.61	149,584	188,819	1.26	145,848	235,514	1.61
1990: Jan	528,549	797,202	1.51	226,704	374,126	1.65	151,968	189,375	1.25	149,877	233,701	1.56
Feb	535,996	794,016	1.48	234,472	373,169	1.59	151,620	188,847	1.25	149,904	232,000	1.55
Mar	538,984	793,669	1.47	237,299	371,746	1.57	152,383	189,361	1.24	149,302	232,562	1.56
Apr	533,603	796,050	1.49	234,259	372,300	1.59	151,458	190,903	1.26	147,886	232,847	1.57
May	538,946	800,399	1.49	238,863	372,384	1.56	152,302	193,201	1.27	147,781	234,814	1.59
June	542,441	796,469	1.47	239,460	370,693	1.55	153,549	191,259	1.25	149,432	234,517	1.57
July	540,368	802,151	1.48	237,834	373,285	1.57	152,333	192,466	1.26	150,201	236,400	1.57
Aug	551,473	807,491	1.46	245,646	374,298	1.52	155,586	193,002	1.24	150,241	240,191	1.60
Sept	547,215	810,848	1.48	243,291	376,981	1.55	152,365	193,314	1.27	151,559	240,553	1.59
Oct	551,570	814,322	1.48	246,995	377,451	1.53	152,824	194,505	1.27	151,751	242,366	1.60
Nov [p]	544,939	816,320	1.50	241,332	378,199	1.57	151,972	196,091	1.29	151,635	242,030	1.60

[1] Monthly average for year and total for month.

[2] Seasonally adjusted, end of period. Inventories beginning January 1982 for manufacturing and December 1980 for wholesale and retail trade are not comparable with earlier periods.

[3] Inventory/sales ratio. Annual data are: beginning 1981, averages of monthly ratios; for 1958–80, ratio of December inventories to monthly average sales for the year; and for earlier years, weighted averages. Monthly data are ratio of inventories at end of month to sales for month.

Note.—Earlier data are not strictly comparable with data beginning 1958 for manufacturing and beginning 1967 for wholesale and retail trade.

Source: Department of Commerce, Bureau of the Census.

TABLE B–56.—*Manufacturers' shipments and inventories, 1947–90*

[Millions of dollars; monthly data seasonally adjusted]

Year or month	Shipments[1]			Inventories[2]								
	Total	Durable goods industries	Nondurable goods industries	Total	Durable goods industries				Nondurable goods industries			
					Total	Materials and supplies	Work in process	Finished goods	Total	Materials and supplies	Work in process	Finished goods
1947	15,513	6,694	8,819	25,897	13,061	......	......	......	12,836	......	......	......
1948	17,316	7,579	9,738	28,543	14,662	......	......	......	13,881	......	......	......
1949	16,126	7,191	8,935	26,321	13,060	......	......	......	13,261	......	......	......
1950	18,634	8,845	9,789	31,078	15,539	......	......	......	15,539	......	......	......
1951	21,714	10,493	11,221	39,306	20,991	......	......	......	18,315	......	......	......
1952	22,529	11,313	11,216	41,136	23,731	......	......	......	17,405	......	......	......
1953	24,843	13,349	11,494	43,948	25,878	8,966	10,720	6,206	18,070	8,317	2,472	7,409
1954	23,355	11,828	11,527	41,612	23,710	7,894	9,721	6,040	17,902	8,167	2,440	7,415
1955	26,480	14,071	12,409	45,069	26,405	9,194	10,756	6,348	18,664	8,556	2,571	7,666
1956	27,740	14,715	13,025	50,642	30,447	10,417	12,317	7,565	20,195	8,971	2,721	8,622
1957	28,736	15,237	13,499	51,871	31,728	10,608	12,837	8,125	20,143	8,775	2,864	8,624
1958	27,247	13,563	13,684	50,280	30,282	10,043	12,392	7,847	19,998	8,669	2,832	8,497
1959	30,286	15,609	14,677	52,982	32,099	10,783	13,070	8,246	20,883	9,083	2,947	8,853
1960	30,879	15,883	14,996	53,823	32,399	10,361	12,783	9,255	21,424	9,088	2,950	9,386
1961	30,923	15,616	15,307	54,919	32,563	10,290	13,204	9,069	22,356	9,502	3,109	9,745
1962	33,357	17,262	16,095	58,214	34,647	10,824	14,156	9,667	23,567	9,819	3,298	10,450
1963	35,058	18,280	16,778	60,081	35,889	11,080	14,874	9,935	24,192	9,984	3,407	10,801
1964	37,331	19,637	17,694	63,440	38,528	11,981	16,192	10,355	24,912	10,134	3,517	11,261
1965	40,995	22,221	18,774	68,225	42,286	13,341	18,077	10,868	25,939	10,453	3,811	11,675
1966	44,870	24,649	20,220	78,000	49,950	15,503	21,939	12,508	28,050	11,159	4,207	12,684
1967	46,487	25,267	21,220	84,662	55,005	16,455	25,004	13,546	29,657	11,714	4,421	13,522
1968	50,228	27,659	22,570	90,617	58,876	17,376	27,335	14,165	31,741	12,290	4,848	14,603
1969	53,501	29,437	24,064	98,202	64,738	18,693	30,408	15,637	33,464	12,725	5,122	15,617
1970	52,805	28,188	24,617	101,652	66,781	19,182	29,848	17,751	34,871	13,150	5,274	16,447
1971	55,906	29,954	25,952	102,658	66,289	19,759	28,650	17,880	36,369	13,683	5,665	17,021
1972	63,027	34,027	29,000	108,240	70,250	20,860	30,788	18,602	37,990	14,676	5,982	17,332
1973	72,931	39,681	33,250	124,630	81,399	26,029	35,546	19,824	43,231	18,132	6,707	18,392
1974	84,790	44,230	40,560	157,793	101,741	35,151	42,603	23,987	56,052	23,700	8,175	24,177
1975	86,589	43,659	42,931	159,932	102,871	33,920	43,369	25,582	57,061	23,542	8,837	24,682
1976	98,797	50,700	48,097	175,195	112,584	37,548	46,344	28,692	62,611	25,832	9,933	26,846
1977	113,202	59,267	53,935	189,214	121,601	40,251	50,620	30,730	67,613	27,398	11,003	29,212
1978	126,905	67,848	59,057	210,509	137,891	45,252	58,634	34,005	72,618	29,317	11,907	31,394
1979	143,936	76,060	67,876	241,100	160,533	52,687	69,254	38,592	80,567	32,451	13,741	34,375
1980	154,391	77,550	76,841	264,281	174,620	55,121	76,997	42,502	89,661	36,206	15,732	37,723
1981	168,129	83,872	84,257	282,645	186,347	57,927	81,105	47,315	96,298	37,758	16,074	42,466
1982	163,350	79,352	83,998	311,827	200,825	58,960	87,223	54,642	111,002	43,915	18,585	48,502
1983	171,242	84,956	86,286	312,647	200,406	60,203	87,643	52,560	112,241	44,643	18,842	48,756
1984	187,869	96,623	91,246	334,767	218,771	64,881	97,750	56,140	115,996	44,917	18,978	52,101
1985	190,016	99,019	90,996	327,496	214,066	62,229	97,253	54,584	113,430	42,964	18,926	51,540
1986	188,360	99,989	88,371	316,182	208,313	60,218	94,466	53,629	107,869	41,540	17,360	48,969
1987	199,170	105,291	93,879	331,132	216,598	61,255	99,952	55,391	114,534	44,354	18,752	51,428
1988	217,632	115,684	101,948	354,163	233,666	65,252	108,392	60,022	120,497	47,294	19,291	53,912
1989	231,780	122,668	109,112	371,082	246,222	67,375	117,303	61,544	124,860	46,789	20,925	57,146
1989: Jan	231,485	123,578	107,907	357,458	236,810	66,273	109,309	61,228	120,648	46,963	19,532	54,153
Feb	228,353	120,924	107,429	359,056	238,165	66,852	110,118	61,195	120,891	46,900	19,522	54,469
Mar	228,048	120,432	107,616	361,130	239,330	67,278	111,555	60,497	121,800	46,858	20,075	54,867
Apr	234,042	123,331	110,711	363,458	240,486	66,887	113,381	60,218	122,972	46,780	20,493	55,699
May	233,071	122,962	110,109	365,055	241,689	66,748	114,291	60,650	123,366	46,679	20,290	56,397
June	231,236	121,720	109,516	366,492	242,295	66,681	114,668	60,946	124,197	46,773	20,524	56,900
July	225,922	117,114	108,808	370,803	245,813	67,565	116,487	61,761	124,990	46,891	20,837	57,262
Aug	238,150	128,347	109,803	371,489	246,378	67,746	116,560	62,072	125,111	47,073	20,919	57,119
Sept	233,562	124,393	109,169	370,890	245,621	67,611	115,477	62,533	125,269	46,643	20,985	57,641
Oct	231,995	121,840	110,155	371,712	246,427	68,010	115,756	62,661	125,285	46,769	21,405	57,111
Nov	232,826	123,209	109,617	372,813	247,610	68,058	117,051	62,501	125,203	47,069	21,146	56,988
Dec	231,003	121,998	109,005	371,082	246,222	67,375	117,303	61,544	124,860	46,789	20,925	57,146
1990: Jan	226,704	116,716	109,988	374,126	248,273	68,092	118,854	61,327	125,853	46,721	20,993	58,139
Feb	234,472	123,224	111,248	373,169	247,095	67,402	117,691	62,002	126,074	46,743	20,897	58,434
Mar	237,299	125,089	112,210	371,746	245,435	66,744	116,921	61,770	126,311	47,063	20,880	58,368
Apr	234,259	122,031	112,228	372,300	246,609	66,689	117,810	62,110	125,691	46,876	20,760	58,055
May	238,863	126,507	112,356	372,384	246,530	66,814	117,482	62,234	125,854	46,738	20,905	58,211
June	239,460	127,283	112,177	370,693	244,902	66,424	116,326	62,152	125,791	46,622	20,588	58,581
July	237,834	125,090	112,744	373,285	246,456	66,924	117,202	62,330	126,829	47,036	20,706	59,087
Aug	245,646	128,619	117,027	374,298	246,653	66,444	117,530	62,679	127,645	47,357	21,148	59,140
Sept	243,291	124,315	118,976	376,981	246,926	66,564	117,924	62,438	130,055	47,694	21,700	60,661
Oct	246,995	126,196	120,799	377,451	246,818	67,001	117,414	62,403	130,633	48,102	21,730	60,801
Nov p	241,332	121,487	119,845	378,199	247,785	67,375	117,743	62,667	130,414	48,334	21,468	60,612

[1] Monthly average for year and total for month.

[2] Seasonally adjusted, end of period. Data beginning 1982 are not comparable with data for prior periods.

Note.—Data beginning 1958 are not strictly comparable with earlier data.

Source: Department of Commerce, Bureau of the Census.

TABLE B-57.—*Manufacturers' new and unfilled orders, 1947-90*

[Amounts in millions of dollars; monthly data seasonally adjusted]

Year or month	New orders [1]				Unfilled orders [2]			Unfilled orders—shipments ratio [3]		
	Total	Durable goods industries		Nondurable goods industries	Total	Durable goods industries	Nondurable goods industries	Total	Durable goods industries	Nondurable goods industries
		Total	Capital goods industries, nondefense							
1947	15,256	6,388	...	8,868	34,473	28,579	5,894	...	...	...
1948	17,693	8,126	...	9,566	30,736	26,619	4,117	...	...	...
1949	15,614	6,633	...	8,981	24,045	19,622	4,423	...	...	...
1950	20,110	10,165	...	9,945	41,456	35,435	6,021	...	...	...
1951	23,907	12,841	...	11,066	67,266	63,394	3,872	...	...	...
1952	23,204	12,061	...	11,143	75,857	72,680	3,177	...	...	...
1953	23,586	12,147	...	11,439	61,178	58,637	2,541	...	...	...
1954	22,335	10,768	...	11,566	48,266	45,250	3,016	3.42	4.12	0.96
1955	27,465	14,996	...	12,469	60,004	56,241	3,763	3.63	4.27	1.12
1956	28,368	15,365	...	13,003	67,375	63,880	3,495	3.87	4.55	1.04
1957	27,559	14,111	...	13,448	53,183	50,352	2,831	3.35	4.00	.85
1958	27,191	13,397	...	13,795	46,806	43,991	2,815	3.05	3.64	.86
1959	30,731	16,010	...	14,721	52,242	48,878	3,364	2.98	3.50	.94
1960	30,240	15,308	...	14,932	44,666	42,097	2,569	2.75	3.33	.72
1961	31,106	15,761	...	15,345	47,016	43,979	3,037	2.61	3.10	.79
1962	33,432	17,370	...	16,062	48,124	45,509	2,615	2.66	3.20	.68
1963	35,536	18,721	...	16,815	54,019	50,956	3,063	2.78	3.35	.73
1964	38,339	20,633	...	17,706	66,347	63,152	3,195	3.08	3.69	.72
1965	42,111	23,288	...	18,824	79,685	75,906	3,779	3.31	3.93	.80
1966	46,402	26,176	...	20,225	97,991	94,160	3,831	3.79	4.53	.76
1967	47,056	25,825	...	21,231	104,548	100,578	3,970	3.70	4.40	.73
1968	50,687	28,116	6,915	22,571	109,923	105,947	3,976	3.85	4.65	.69
1969	53,950	29,871	7,660	24,080	115,424	111,253	4,171	3.75	4.50	.69
1970	52,038	27,388	6,738	24,650	106,156	101,565	4,591	3.65	4.39	.77
1971	55,984	29,998	7,444	25,986	107,145	102,118	5,027	3.38	4.06	.77
1972	64,173	35,069	8,622	29,104	121,060	114,724	6,336	3.31	3.90	.88
1973	76,056	42,726	10,971	33,330	158,885	151,506	7,379	3.86	4.56	.93
1974	87,245	46,836	12,673	40,409	188,468	182,926	5,542	4.13	4.96	.64
1975	85,220	42,099	11,011	43,122	172,037	164,139	7,898	3.76	4.52	.84
1976	99,532	51,404	12,791	48,129	180,564	172,274	8,290	3.30	3.94	.76
1977	115,103	61,128	15,242	53,975	204,946	196,244	8,702	3.29	3.90	.72
1978	131,650	72,416	19,420	59,234	262,415	251,525	10,890	3.62	4.25	.83
1979	147,574	79,586	23,221	67,987	306,540	294,272	12,268	3.93	4.66	.83
1980	156,318	79,482	23,242	76,836	329,884	317,677	12,207	3.88	4.62	.76
1981	167,883	83,657	24,012	84,226	327,356	315,529	11,827	3.87	4.67	.69
1982	162,273	78,338	21,661	83,935	314,270	303,187	11,083	3.88	4.78	.63
1983	174,122	87,600	22,098	86,522	349,419	335,367	14,052	3.59	4.34	.70
1984	189,791	98,581	26,243	91,209	372,586	358,899	13,687	3.64	4.41	.65
1985	190,918	99,843	27,067	91,075	383,181	388,427	14,754	3.72	4.51	.69
1986	188,663	100,166	26,551	88,497	387,065	370,700	16,365	3.63	4.43	.71
1987	201,966	107,770	29,707	94,197	421,243	400,720	20,523	3.65	4.41	.83
1988	221,627	119,634	35,028	101,993	468,860	447,868	20,992	3.66	4.43	.78
1989	235,614	126,557	38,821	109,057	514,499	494,196	20,303	3.99	4.81	.77
1989: Jan	236,075	128,479	40,352	107,596	473,450	452,769	20,681	3.71	4.51	.77
Feb	231,306	124,107	37,189	107,199	476,403	455,952	20,451	3.78	4.61	.75
Mar	233,011	125,377	38,137	107,634	481,366	460,897	20,469	3.83	4.65	.77
Apr	239,907	129,372	40,389	110,535	487,231	466,938	20,293	3.79	4.61	.74
May	233,753	123,524	37,290	110,229	487,913	467,500	20,413	3.80	4.62	.75
June	235,157	125,137	39,146	110,020	491,834	470,917	20,917	3.84	4.66	.77
July	230,447	122,031	41,445	108,416	496,359	475,834	20,525	3.95	4.83	.76
Aug	236,793	126,766	37,130	110,027	495,002	474,253	20,749	3.74	4.52	.76
Sept	234,354	125,227	35,341	109,127	495,794	475,087	20,707	3.79	4.59	.76
Oct	234,067	124,262	35,975	109,805	497,866	477,509	20,357	3.87	4.71	.74
Nov	239,710	130,175	38,901	109,535	504,750	484,475	20,275	3.91	4.76	.74
Dec	240,752	131,719	44,389	109,033	514,499	494,196	20,303	3.99	4.81	.77
1990: Jan	227,572	117,909	38,347	109,663	515,367	495,389	19,978	4.06	4.97	.73
Feb	231,759	120,782	36,094	110,977	512,654	492,947	19,707	3.90	4.77	.70
Mar	241,071	128,872	40,889	112,199	516,426	496,730	19,696	3.90	4.77	.70
Apr	236,026	123,609	36,573	112,417	518,193	498,308	19,885	3.96	4.87	.70
May	241,102	128,737	35,928	112,365	520,432	500,538	19,894	3.90	4.76	.70
June	236,578	124,692	36,192	111,886	517,550	497,947	19,603	3.85	4.68	.70
July	240,238	128,094	39,840	112,144	519,954	500,951	19,003	3.91	4.78	.67
Aug	244,355	126,979	35,871	117,376	518,663	499,311	19,352	3.83	4.66	.68
Sept	243,903	124,972	38,293	118,931	519,275	499,968	19,307	3.91	4.80	.68
Oct	250,117	129,458	41,633	120,659	522,397	503,230	19,167	3.91	4.77	.68
Nov [p]	236,114	116,427	35,812	119,687	517,179	498,170	19,009	3.95	4.85	.67

[1] Monthly average for year and total for month.

[2] Seasonally adjusted, end of period.

[3] Ratio of unfilled orders at end of period to shipments for period; excludes industries with no unfilled orders. Annual figures relate to seasonally adjusted data for December.

Note.—Data beginning 1958 are not strictly comparable with earlier data.

Source: Department of Commerce, Bureau of the Census.

TABLE B–58.—*Consumer price indexes, major expenditure classes, 1946–90*

[1982–84=100]

Year or month	All items	Food and beverages		Housing				Apparel and upkeep	Transportation	Medical care	Entertainment	Other goods and services	Energy [3]
		Total [1]	Food	Total	Shelter	Fuel and other utilities [2]	Household furnishings and operation						
1946	19.5	....	19.8	....	....	....	....	34.4	16.7	12.5	....	....	....
1947	22.3	....	24.1	....	....	....	....	39.9	18.5	13.5	....	....	....
1948	24.1	....	26.1	....	....	....	....	42.5	20.6	14.4	....	....	....
1949	23.8	....	25.0	....	....	....	....	40.8	22.1	14.8	....	....	....
1950	24.1	....	25.4	....	....	....	....	40.3	22.7	15.1	....	....	....
1951	26.0	....	28.2	....	....	....	....	43.9	24.1	15.9	....	....	....
1952	26.5	....	28.7	....	....	....	....	43.5	25.7	16.7	....	....	....
1953	26.7	....	28.3	....	22.0	22.5	....	43.1	26.5	17.3	....	....	....
1954	26.9	....	28.2	....	22.5	22.6	....	43.1	26.1	17.8	....	....	....
1955	26.8	....	27.8	....	22.7	23.0	....	42.9	25.8	18.2	....	....	....
1956	27.2	....	28.0	....	23.1	23.6	....	43.7	26.2	18.9	....	....	....
1957	28.1	....	28.9	....	24.0	24.3	....	44.5	27.7	19.7	....	....	21.5
1958	28.9	....	30.2	....	24.5	24.8	....	44.6	28.6	20.6	....	....	21.5
1959	29.1	....	29.7	....	24.7	25.4	....	45.0	29.8	21.5	....	....	21.9
1960	29.6	....	30.0	....	25.2	26.0	....	45.7	29.8	22.3	....	....	22.4
1961	29.9	....	30.4	....	25.4	26.3	....	46.1	30.1	22.9	....	....	22.5
1962	30.2	....	30.6	....	25.8	26.3	....	46.3	30.8	23.5	....	....	22.6
1963	30.6	....	31.1	....	26.1	26.6	....	46.9	30.9	24.1	....	....	22.6
1964	31.0	....	31.5	....	26.5	26.6	....	47.3	31.4	24.6	....	....	22.5
1965	31.5	....	32.2	....	27.0	26.6	....	47.8	31.9	25.2	....	....	22.9
1966	32.4	....	33.8	....	27.8	26.7	....	49.0	32.3	26.3	....	....	23.3
1967	33.4	35.0	34.1	30.8	28.8	27.1	42.0	51.0	33.3	28.2	40.7	35.1	23.8
1968	34.8	36.2	35.3	32.0	30.1	27.4	43.6	53.7	34.3	29.9	43.0	36.9	24.2
1969	36.7	38.1	37.1	34.0	32.6	28.0	45.2	56.8	35.7	31.9	45.2	38.7	24.8
1970	38.8	40.1	39.2	36.4	35.5	29.1	46.8	59.2	37.5	34.0	47.5	40.9	25.5
1971	40.5	41.4	40.4	38.0	37.0	31.1	48.6	61.1	39.5	36.1	50.0	42.9	26.5
1972	41.8	43.1	42.1	39.4	38.7	32.5	49.7	62.3	39.9	37.3	51.5	44.7	27.2
1973	44.4	48.8	48.2	41.2	40.5	34.3	51.1	64.6	41.2	38.8	52.9	46.4	29.4
1974	49.3	55.5	55.1	45.8	44.4	40.7	56.8	69.4	45.8	42.4	56.9	49.8	38.1
1975	53.8	60.2	59.8	50.7	48.8	45.4	63.4	72.5	50.1	47.5	62.0	53.9	42.1
1976	56.9	62.1	61.6	53.8	51.5	49.4	67.3	75.2	55.1	52.0	65.1	57.0	45.1
1977	60.6	65.8	65.5	57.4	54.9	54.7	70.4	78.6	59.0	57.0	68.3	60.4	49.4
1978	65.2	72.2	72.0	62.4	60.5	58.5	74.7	81.4	61.7	61.8	71.9	64.3	52.5
1979	72.6	79.9	79.9	70.1	68.9	64.8	79.9	84.9	70.5	67.5	76.7	68.9	65.7
1980	82.4	86.7	86.8	81.1	81.0	75.4	86.3	90.9	83.1	74.9	83.6	75.2	86.0
1981	90.9	93.5	93.6	90.4	90.5	86.4	93.0	95.3	93.2	82.9	90.1	82.6	97.7
1982	96.5	97.3	97.4	96.9	96.9	94.9	98.0	97.8	97.0	92.5	96.0	91.1	99.2
1983	99.6	99.5	99.4	99.5	99.1	100.2	100.2	100.2	99.3	100.6	100.1	101.1	99.9
1984	103.9	103.2	103.2	103.6	104.0	104.8	101.9	102.1	103.7	106.8	103.8	107.9	100.9
1985	107.6	105.6	105.6	107.7	109.8	106.5	103.8	105.0	106.4	113.5	107.9	114.5	101.6
1986	109.6	109.1	109.0	110.9	115.8	104.1	105.2	105.9	102.3	122.0	111.6	121.4	88.2
1987	113.6	113.5	113.5	114.2	121.3	103.0	107.1	110.6	105.4	130.1	115.3	128.5	88.6
1988	118.3	118.2	118.2	118.5	127.1	104.4	109.4	115.4	108.7	138.6	120.3	137.0	89.3
1989	124.0	124.9	125.1	123.0	132.8	107.8	111.2	118.6	114.1	149.3	126.5	147.7	94.3
1990	130.7	132.1	132.4	128.5	140.0	111.6	113.3	124.1	120.5	162.8	132.4	159.0	102.1
1989: Jan	121.1	122.0	122.2	120.7	129.8	106.0	110.9	115.3	111.1	143.8	123.8	143.4	89.0
Feb	121.6	122.7	122.9	121.1	130.3	105.9	110.9	115.3	111.6	145.2	124.3	144.1	89.3
Mar	122.3	123.3	123.5	121.5	131.2	105.9	110.5	119.3	111.9	146.1	124.7	144.4	89.8
Apr	123.1	124.0	124.2	121.6	131.2	106.2	110.7	120.9	114.6	146.8	125.4	144.7	94.9
May	123.8	124.7	124.9	122.1	131.8	107.0	110.8	120.4	116.0	147.5	125.5	145.4	97.4
June	124.1	124.9	125.0	122.9	132.3	109.2	111.1	117.8	115.9	148.5	126.2	146.3	99.0
July	124.4	125.4	125.5	123.9	133.6	109.7	111.4	115.0	115.4	149.7	126.9	147.3	98.5
Aug	124.6	125.6	125.8	124.2	134.1	109.7	111.4	115.0	114.3	150.7	127.3	148.7	97.0
Sept	125.0	125.9	126.1	124.3	134.1	109.7	111.7	120.0	113.7	151.7	127.8	151.2	95.9
Oct	125.6	126.3	126.5	124.4	134.8	108.0	111.9	122.7	114.5	152.7	128.4	151.8	94.6
Nov	125.9	126.7	126.9	124.5	135.2	107.5	111.9	122.1	115.0	153.9	128.6	151.9	93.2
Dec	126.1	127.2	127.4	124.9	135.6	108.4	111.7	119.2	115.2	154.4	129.1	152.9	93.2
1990: Jan	127.4	130.0	130.4	125.9	136.3	110.8	112.1	116.7	117.2	155.9	129.9	154.0	97.6
Feb	128.0	130.9	131.3	126.1	136.6	110.2	112.8	120.4	117.1	157.5	130.4	154.7	96.4
Mar	128.7	131.2	131.5	126.8	137.8	109.9	112.8	125.4	116.8	158.7	130.9	155.2	95.5
Apr	128.9	131.0	131.3	126.8	138.0	109.4	112.8	126.7	117.3	159.8	131.4	155.8	95.7
May	129.2	131.1	131.3	127.1	138.3	109.9	113.2	125.5	117.7	160.8	131.7	156.6	96.7
June	129.9	131.7	132.0	128.3	139.5	112.2	113.1	123.3	118.2	161.9	131.9	157.8	99.5
July	130.4	132.4	132.7	129.2	141.1	111.3	113.6	120.8	118.4	163.5	132.7	159.2	98.9
Aug	131.6	132.7	132.9	130.2	142.4	112.7	113.3	122.2	120.6	165.0	133.0	160.4	103.6
Sept	132.7	133.0	133.2	130.5	142.3	114.0	113.8	126.8	123.0	165.8	134.1	162.6	108.8
Oct	133.5	133.4	133.6	130.6	142.4	113.4	114.2	128.4	125.8	167.1	134.3	163.2	111.4
Nov	133.8	133.7	134.0	130.4	142.4	112.9	113.8	127.5	126.9	168.4	134.4	163.6	110.9
Dec	133.8	133.9	134.2	130.5	142.7	112.7	113.7	125.3	127.2	169.2	134.6	164.5	110.1

[1] Includes alcoholic beverages, not shown separately.
[2] See table B–59 for components.
[3] See tables B–60 for definition and B–59 for components.

Note.—Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers. Data beginning 1983 incorporate a rental equivalence measure for homeowners' costs and therefore are not strictly comparable with earlier figures.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-59.—*Consumer price indexes, selected expenditure classes, 1946–90*

[1982–84=100, except as noted]

Year or month	Food and beverages				Shelter					Fuel and other utilities				
	Total [1]	Food			Total	Renters' costs		Home-owners' costs [2]	Home mainte-nance and repairs	Total	Household fuels			Other utilities and public services
		Total	At home	Away from home		Total [2]	Rent, resi-dential				Total	Fuel oil and other house-hold fuel com-modities	Gas (piped) and elec-tricity	
1946	...	19.8	...	...	...	...	25.0	...	...	...	...	7.9	18.3	...
1947	...	24.1	25.8	...	...	...	25.8	...	...	...	...	9.0	18.2	...
1948	...	26.1	28.0	...	...	...	27.5	...	...	...	...	10.6	18.7	...
1949	...	25.0	26.9	...	...	...	28.7	...	...	...	...	10.9	19.2	...
1950	...	25.4	27.3	...	...	...	29.7	...	...	...	...	11.3	19.2	...
1951	...	28.2	30.3	...	...	...	30.9	...	...	...	...	11.8	19.3	...
1952	...	28.7	30.8	...	...	...	32.2	...	...	...	...	12.1	19.5	...
1953	...	28.3	30.3	21.5	22.0	...	33.9	...	20.5	22.5	...	12.6	19.9	...
1954	...	28.2	30.1	21.9	22.5	...	35.1	...	20.9	22.6	...	12.6	20.2	...
1955	...	27.8	29.5	22.1	22.7	...	35.6	...	21.4	23.0	...	12.7	20.7	...
1956	...	28.0	29.6	22.6	23.1	...	36.3	...	22.3	23.6	...	13.3	20.9	...
1957	...	28.9	30.6	23.4	24.0	...	37.0	...	23.2	24.3	...	14.0	21.1	...
1958	...	30.2	32.0	24.1	24.5	...	37.6	...	23.6	24.8	...	13.7	21.9	...
1959	...	29.7	31.2	24.8	24.7	...	38.2	...	24.0	25.4	...	13.9	22.4	...
1960	...	30.0	31.5	25.4	25.2	...	38.7	...	24.4	26.0	...	13.8	23.3	...
1961	...	30.4	31.8	26.0	25.4	...	39.2	...	24.8	26.3	...	14.1	23.5	...
1962	...	30.6	32.0	26.7	25.8	...	39.7	...	25.0	26.3	...	14.2	23.5	...
1963	...	31.1	32.4	27.3	26.1	...	40.1	...	25.3	26.6	...	14.4	23.5	...
1964	...	31.5	32.7	27.8	26.5	...	40.5	...	25.8	26.6	...	14.4	23.5	...
1965	...	32.2	33.5	28.4	27.0	...	40.9	...	26.3	26.6	...	14.6	23.5	...
1966	...	33.8	35.2	29.7	27.8	...	41.5	...	27.5	26.7	...	15.0	23.6	...
1967	35.0	34.1	35.1	31.3	28.8	...	42.2	...	28.9	27.1	21.4	15.5	23.7	46.6
1968	36.2	35.3	36.3	32.9	30.1	...	43.3	...	30.6	27.4	21.7	16.0	23.9	47.1
1969	38.1	37.1	38.0	34.9	32.6	...	44.7	...	33.2	28.0	22.1	16.3	24.3	48.4
1970	40.1	39.2	39.9	37.5	35.5	...	46.5	...	35.8	29.1	23.1	17.0	25.4	50.0
1971	41.4	40.4	40.9	39.4	37.0	...	48.7	...	38.6	31.1	24.7	18.2	27.1	53.4
1972	43.1	42.1	42.7	41.0	38.7	...	50.4	...	40.6	32.5	25.7	18.3	28.5	56.2
1973	48.8	48.2	49.7	44.2	40.5	...	52.5	...	43.6	34.3	27.5	21.1	29.9	57.8
1974	55.5	55.1	57.1	49.8	44.4	...	55.2	...	49.5	40.7	34.4	33.2	34.5	60.7
1975	60.2	59.8	61.8	54.5	48.8	...	58.0	...	54.1	45.4	39.4	36.4	40.1	63.9
1976	62.1	61.6	63.1	58.2	51.5	...	61.1	...	57.6	49.4	43.3	38.8	44.7	67.7
1977	65.8	65.5	66.8	62.6	54.9	...	64.8	...	62.0	54.7	49.0	43.9	50.5	70.8
1978	72.2	72.0	73.8	68.3	60.5	...	69.3	...	67.2	58.5	53.0	46.2	55.0	73.7
1979	79.9	79.9	81.8	75.9	68.9	...	74.3	...	74.0	64.8	61.3	62.4	61.0	74.3
1980	86.7	86.8	88.4	83.4	81.0	...	80.9	...	82.4	75.4	74.8	86.1	71.4	77.0
1981	93.5	93.6	94.8	90.9	90.5	...	87.9	...	90.7	86.4	87.2	104.6	81.9	84.3
1982	97.3	97.4	98.1	95.8	96.9	...	94.6	...	96.4	94.9	95.6	103.4	93.2	93.3
1983	99.5	99.4	99.1	100.0	99.1	103.0	100.1	102.5	99.9	100.2	100.5	97.2	101.5	99.5
1984	103.2	103.2	102.8	104.2	104.0	108.6	105.3	107.3	103.7	104.8	104.0	99.4	105.4	107.2
1985	105.6	105.6	104.3	108.3	109.8	115.4	111.8	113.1	106.5	106.5	104.5	95.9	107.1	112.1
1986	109.1	109.0	107.3	112.5	115.8	121.9	118.3	119.4	107.9	104.1	99.2	77.6	105.7	117.9
1987	113.5	113.5	111.9	117.0	121.3	128.1	123.1	124.8	111.8	103.0	97.3	77.9	103.8	120.1
1988	118.2	118.2	116.6	121.8	127.1	133.6	127.8	131.1	114.7	104.4	98.0	78.1	104.6	122.9
1989	124.9	125.1	124.2	127.4	132.8	138.9	132.8	137.3	118.0	107.8	100.9	81.7	107.5	127.1
1990	132.1	132.4	132.3	133.4	140.0	146.7	138.4	144.6	122.2	111.6	104.5	99.3	109.3	131.7
1989: Jan	122.0	122.2	121.2	124.7	129.8	135.2	130.5	134.4	116.1	106.0	98.7	80.5	105.1	125.9
Feb	122.7	122.9	122.0	125.2	130.3	136.3	130.9	134.7	117.1	105.9	98.6	81.4	104.9	126.0
Mar	123.3	123.5	122.7	125.7	131.2	138.6	131.1	135.0	117.1	105.9	98.5	81.5	104.8	125.9
Apr	124.0	124.2	123.5	126.2	131.2	137.9	131.4	135.4	117.3	106.2	98.8	82.5	105.0	126.2
May	124.7	124.9	124.4	126.7	131.8	137.8	131.7	136.2	117.4	107.0	99.6	81.5	106.1	127.0
June	124.9	125.0	124.3	127.1	132.3	138.7	132.3	136.5	118.3	109.2	103.2	80.2	110.5	127.1
July	125.4	125.5	124.8	127.8	133.6	141.5	133.0	137.3	118.4	109.7	103.7	79.7	111.1	127.7
Aug	125.6	125.8	124.9	128.1	134.1	141.5	133.5	138.1	118.5	109.7	103.7	78.9	111.3	127.8
Sept	125.9	126.1	125.0	128.8	134.1	139.4	133.9	138.9	118.6	109.7	103.5	79.3	111.0	128.1
Oct	126.3	126.5	125.4	129.1	134.8	140.0	134.7	139.7	118.6	108.0	101.0	82.0	107.6	127.6
Nov	126.7	126.9	125.8	129.5	135.2	140.1	135.2	140.3	119.3	107.5	99.9	83.9	106.1	127.9
Dec	127.2	127.4	126.5	129.8	135.6	140.1	135.5	140.9	119.5	108.4	101.2	88.7	107.0	128.2
1990: Jan	130.0	130.4	131.0	130.3	136.3	142.0	135.8	141.1	120.4	110.8	104.5	113.1	107.5	129.3
Feb	130.9	131.3	132.1	131.0	136.6	143.5	136.0	141.0	120.8	110.2	103.1	95.4	108.3	130.0
Mar	131.2	131.5	131.9	131.8	137.8	144.8	136.5	142.2	121.2	109.9	102.3	91.5	107.9	130.7
Apr	131.0	131.3	131.1	132.5	138.0	144.7	137.0	142.5	121.2	109.4	101.2	89.6	106.8	130.9
May	131.1	131.3	130.9	133.0	138.3	144.4	137.3	143.1	122.2	109.9	101.9	88.0	107.8	131.2
June	131.7	132.0	131.7	133.4	139.5	145.3	137.9	144.4	121.8	112.2	105.4	84.9	112.4	131.8
July	132.4	132.7	132.5	133.9	141.1	148.7	138.7	145.4	122.1	111.3	104.5	82.7	111.7	130.8
Aug	132.7	132.9	132.7	134.3	142.4	150.7	139.4	146.5	121.2	112.7	105.6	91.8	111.6	132.8
Sept	133.0	133.2	132.9	134.6	142.3	148.9	140.0	147.0	124.6	114.0	107.6	104.4	112.4	132.9
Oct	133.4	133.6	133.4	135.0	142.4	148.9	140.5	147.2	123.4	113.4	106.4	118.5	109.0	133.4
Nov	133.7	134.0	133.8	135.4	142.4	149.0	140.7	147.3	123.9	112.9	105.4	117.0	108.0	133.7
Dec	133.9	134.2	133.8	135.7	142.7	149.5	141.1	147.5	123.8	112.7	105.6	114.1	108.6	132.7

[1] Includes alcoholic beverages, not shown separately.

[2] December 1982=100.

See next page for continuation of table.

TABLE B–59.—*Consumer price indexes, selected expenditure classes, 1946–90*—Continued

[1982–84=100, except as noted]

Year or month	Transportation								Medical care		
	Total	Private transportation						Public transportation	Total	Medical care commodities	Medical care services
		Total [3]	New cars	Used cars	Motor fuel [4]	Automobile maintenance and repairs	Other				
1946	16.7	18.3	...	...	14.5	15.8	...	9.4	12.5	34.2	10.4
1947	18.5	20.8	34.1	...	16.4	17.1	...	9.9	13.5	36.7	11.3
1948	20.6	23.0	37.3	...	18.6	18.1	...	11.2	14.4	38.6	12.1
1949	22.1	24.4	40.8	...	19.1	18.6	...	12.4	14.8	39.2	12.5
1950	22.7	24.5	41.1	...	19.0	18.9	...	13.4	15.1	39.7	12.8
1951	24.1	25.6	43.1	...	19.5	20.4	...	14.8	15.9	40.8	13.4
1952	25.7	27.3	46.8	...	20.0	20.8	...	15.8	16.7	41.2	14.3
1953	26.5	27.8	47.2	26.7	21.2	22.0	...	16.8	17.3	41.5	14.8
1954	26.1	27.1	46.5	22.7	21.8	22.7	...	18.0	17.8	42.0	15.3
1955	25.8	26.7	44.8	21.5	22.1	23.2	...	18.5	18.2	42.5	15.7
1956	26.2	27.1	46.1	20.7	22.8	24.2	...	19.2	18.9	43.4	16.3
1957	27.7	28.6	48.5	23.2	23.8	25.0	...	19.9	19.7	44.6	17.0
1958	28.6	29.5	50.0	24.0	23.4	25.4	...	20.9	20.6	46.1	17.9
1959	29.8	30.8	52.2	26.8	23.7	26.0	...	21.5	21.5	46.8	18.7
1960	29.8	30.6	51.5	25.0	24.4	26.5	...	22.2	22.3	46.9	19.5
1961	30.1	30.8	51.5	26.0	24.1	27.1	...	23.2	22.9	46.3	20.2
1962	30.8	31.4	51.3	28.4	24.3	27.5	...	24.0	23.5	45.6	20.9
1963	30.9	31.6	51.0	28.7	24.2	27.8	...	24.3	24.1	45.2	21.5
1964	31.4	32.0	50.9	30.0	24.1	28.2	...	24.7	24.6	45.1	22.0
1965	31.9	32.5	49.7	29.8	25.1	28.7	...	25.2	25.2	45.0	22.7
1966	32.3	32.9	48.8	29.0	25.6	29.2	...	26.1	26.3	45.1	23.9
1967	33.3	33.8	49.3	29.9	26.4	30.4	37.9	27.4	28.2	44.9	26.0
1968	34.3	34.8	50.7	(5)	26.8	32.1	39.2	28.7	29.9	45.0	27.9
1969	35.7	36.0	51.5	30.9	27.6	34.1	41.6	30.9	31.9	45.4	30.2
1970	37.5	37.5	53.0	31.2	27.9	36.6	45.2	35.2	34.0	46.5	32.3
1971	39.5	39.4	55.2	33.0	28.1	39.3	48.6	37.8	36.1	47.3	34.7
1972	39.9	39.7	54.7	33.1	28.4	41.1	48.9	39.3	37.3	47.4	35.9
1973	41.2	41.0	54.8	35.2	31.2	43.2	48.4	39.7	38.8	47.5	37.5
1974	45.8	46.2	57.9	36.7	42.2	47.6	50.2	40.6	42.4	49.2	41.4
1975	50.1	50.6	62.9	43.8	45.1	53.7	53.5	43.5	47.5	53.3	46.6
1976	55.1	55.6	66.9	50.3	47.0	57.6	61.8	47.8	52.0	56.5	51.3
1977	59.0	59.7	70.4	54.7	49.7	61.9	67.2	50.0	57.0	60.2	56.4
1978	61.7	62.5	75.8	55.8	51.8	67.0	69.9	51.5	61.8	64.4	61.2
1979	70.5	71.7	81.8	60.2	70.1	73.7	75.2	54.9	67.5	69.0	67.2
1980	83.1	84.2	88.4	62.3	97.4	81.5	84.3	69.0	74.9	75.4	74.8
1981	93.2	93.8	93.7	76.9	108.5	89.2	91.4	85.6	82.9	83.7	82.8
1982	97.0	97.1	97.4	88.8	102.8	96.0	97.7	94.9	92.5	92.3	92.6
1983	99.3	99.3	99.9	98.7	99.4	100.3	98.8	99.5	100.6	100.2	100.7
1984	103.7	103.6	102.8	112.5	97.9	103.8	103.5	105.7	106.8	107.5	106.7
1985	106.4	106.2	106.1	113.7	98.7	106.8	109.0	110.5	113.5	115.2	113.2
1986	102.3	101.2	110.6	108.8	77.1	110.3	115.1	117.0	122.0	122.8	121.9
1987	105.4	104.2	114.6	113.1	80.2	114.8	120.8	121.1	130.1	131.0	130.0
1988	108.7	107.6	116.9	118.0	80.9	119.7	127.9	123.3	138.6	139.9	138.3
1989	114.1	112.9	119.2	120.4	88.5	124.9	135.8	129.5	149.3	150.8	148.9
1990	120.5	118.8	121.0	117.6	101.2	130.1	142.5	142.6	162.8	163.4	162.7
1989: Jan	111.1	109.8	119.5	120.5	79.6	122.4	133.5	127.5	143.8	145.0	143.5
Feb	111.6	110.3	119.6	120.5	80.3	123.3	134.3	128.1	145.2	145.8	145.1
Mar	111.9	110.7	119.6	120.5	81.5	123.5	134.5	128.2	146.1	147.2	145.9
Apr	114.6	113.6	119.4	120.7	92.1	123.8	134.7	128.4	146.8	148.4	146.4
May	116.0	115.0	119.5	121.0	96.6	124.3	135.6	128.9	147.5	150.0	146.9
June	115.9	114.9	119.1	121.3	96.0	124.5	135.9	129.6	148.5	151.0	147.9
July	115.4	114.3	118.6	121.1	94.4	124.8	135.6	129.7	149.7	151.4	149.3
Aug	114.3	113.1	117.7	120.3	91.0	125.4	135.7	130.1	150.7	152.1	150.4
Sept	113.7	112.4	117.0	119.8	88.8	126.2	135.7	130.1	151.7	153.3	151.3
Oct	114.5	113.3	118.6	119.7	88.9	126.7	137.1	130.6	152.7	154.1	152.3
Nov	115.0	113.7	120.5	120.1	87.2	126.7	138.2	131.3	153.9	155.3	153.6
Dec	115.2	113.9	121.8	119.7	85.8	126.9	139.0	131.7	154.4	156.0	154.1
1990: Jan	117.2	115.9	122.3	118.9	91.4	127.3	140.3	134.2	155.9	156.9	155.7
Feb	117.1	115.6	121.9	117.4	90.6	127.6	140.8	136.7	157.5	158.6	157.2
Mar	116.8	115.1	121.3	116.6	89.3	128.8	140.7	139.1	158.7	159.9	158.5
Apr	117.3	115.5	120.7	116.2	91.2	129.4	140.8	140.3	159.8	161.3	159.4
May	117.7	115.9	120.7	116.9	92.5	129.4	140.8	140.9	160.8	162.2	160.5
June	118.2	116.4	120.3	117.6	94.6	129.6	141.0	141.5	161.9	163.3	161.5
July	118.4	116.6	119.8	118.2	94.3	130.2	142.1	141.6	163.5	164.1	163.4
Aug	120.6	119.0	119.5	118.3	103.2	130.4	142.4	141.9	165.0	164.8	165.0
Sept	123.0	121.4	119.0	118.3	112.0	131.5	143.0	144.0	165.8	166.0	165.8
Oct	125.8	124.2	120.5	118.1	118.9	132.1	144.8	146.0	167.1	166.8	167.2
Nov	126.9	125.1	122.1	117.2	119.0	132.5	146.2	150.3	168.4	167.8	168.6
Dec	127.2	125.1	123.5	117.1	117.1	132.5	146.7	154.4	169.2	169.1	169.3

[3] Includes direct pricing of new trucks and motorcycles beginning September 1982.

[4] Includes direct pricing of diesel fuel and gasohol beginning September 1981.

[5] Not available.

Note.—Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers. See also Note, Table B–58.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–60.—*Consumer price indexes, commodities, services, and special groups, 1946–90*

[1982–84=100]

Year or month	All items	Commodities						Services			Special indexes			
		All commodities	Food	Commodities less food				All services	Medical care services	Services less medical care	All items less food	All items less energy	All items less food and energy	Energy [1]
				All	Durable	Nondurable								
1946	19.5	22.9	19.8	26.3	29.2	23.6		14.1	10.4	......	19.8	......	......	......
1947	22.3	27.6	24.1	29.7	31.7	27.1		14.7	11.3	......	21.7	......	......	......
1948	24.1	29.6	26.1	31.9	34.0	29.2		15.6	12.1	......	23.3	......	......	......
1949	23.8	28.8	25.0	31.5	34.5	28.7		16.4	12.5	......	23.5	......	......	......
1950	24.1	29.0	25.4	31.4	34.9	28.6		16.9	12.8	......	23.8	......	......	......
1951	26.0	31.6	28.2	33.8	37.5	30.8		17.8	13.4	......	25.3	......	......	......
1952	26.5	32.0	28.7	34.1	38.0	31.0		18.6	14.3	......	25.9	......	......	......
1953	26.7	31.9	28.3	34.2	37.7	31.2		19.4	14.8	......	26.4	......	......	......
1954	26.9	31.6	28.2	33.8	36.8	31.4		20.0	15.3	......	26.6	......	......	......
1955	26.8	31.3	27.8	33.6	36.1	31.4		20.4	15.7	......	26.6	......	......	......
1956	27.2	31.6	28.0	33.9	36.1	32.0		20.9	16.3	......	27.1	......	......	......
1957	28.1	32.6	28.9	34.9	37.2	32.9		21.8	17.0	22.8	28.0	28.9	28.9	21.5
1958	28.9	33.3	30.2	35.3	37.8	33.1		22.6	17.9	23.6	28.6	29.7	29.6	21.5
1959	29.1	33.3	29.7	35.8	38.4	33.5		23.3	18.7	24.2	29.2	29.9	30.2	21.9
1960	29.6	33.6	30.0	36.0	38.1	34.1		24.1	19.5	25.0	29.7	30.4	30.6	22.4
1961	29.9	33.8	30.4	36.1	38.1	34.3		24.5	20.2	25.4	30.0	30.7	31.0	22.5
1962	30.2	34.1	30.6	36.3	38.5	34.5		25.0	20.9	25.9	30.3	31.1	31.4	22.6
1963	30.6	34.4	31.1	36.6	38.6	34.8		25.5	21.5	26.3	30.7	31.5	31.8	22.6
1964	31.0	34.8	31.5	36.9	39.0	35.1		26.0	22.0	26.8	31.1	32.0	32.3	22.5
1965	31.5	35.2	32.2	37.2	38.8	35.6		26.6	22.7	27.4	31.6	32.5	32.7	22.9
1966	32.4	36.1	33.8	37.7	38.9	36.4		27.6	23.9	28.3	32.3	33.5	33.5	23.3
1967	33.4	36.8	34.1	38.6	39.4	37.6		28.8	26.0	29.3	33.4	34.4	34.7	23.8
1968	34.8	38.1	35.3	40.0	40.7	39.1		30.3	27.9	30.8	34.9	35.9	36.3	24.2
1969	36.7	39.9	37.1	41.7	42.2	40.9		32.4	30.2	32.9	36.8	38.0	38.4	24.8
1970	38.8	41.7	39.2	43.4	44.1	42.5		35.0	32.3	35.6	39.0	40.3	40.8	25.5
1971	40.5	43.2	40.4	45.1	46.0	44.0		37.0	34.7	37.5	40.8	42.0	42.7	26.5
1972	41.8	44.5	42.1	46.1	46.9	45.0		38.4	35.9	38.9	42.0	43.4	44.0	27.2
1973	44.4	47.8	48.2	47.7	48.1	46.9		40.1	37.5	40.6	43.7	46.1	45.6	29.4
1974	49.3	53.5	55.1	52.8	51.5	52.9		43.8	41.4	44.3	48.0	50.6	49.4	38.1
1975	53.8	58.2	59.8	57.6	57.4	57.0		48.0	46.6	48.3	52.5	55.1	53.9	42.1
1976	56.9	60.7	61.6	60.5	60.9	59.5		52.0	51.3	52.2	56.0	58.2	57.4	45.1
1977	60.6	64.2	65.5	63.8	64.4	62.5		56.0	56.4	55.9	59.6	61.9	61.0	49.4
1978	65.2	68.8	72.0	67.5	68.6	65.5		60.8	61.2	60.7	63.9	66.7	65.5	52.5
1979	72.6	76.6	79.9	75.3	75.4	74.6		67.5	67.2	67.5	71.2	73.4	71.9	65.7
1980	82.4	86.0	86.8	85.7	83.0	88.4		77.9	74.8	78.2	81.5	81.9	80.8	86.0
1981	90.9	93.2	93.6	93.1	89.6	96.7		88.1	82.8	88.7	90.4	90.1	89.2	97.7
1982	96.5	97.0	97.4	96.9	95.1	98.3		96.0	92.6	96.4	96.3	96.1	95.8	99.2
1983	99.6	99.8	99.4	100.0	99.8	100.0		99.4	100.7	99.2	99.7	99.6	99.6	99.9
1984	103.9	103.2	103.2	103.1	105.1	101.7		104.6	106.7	104.4	104.0	104.3	104.6	100.9
1985	107.6	105.4	105.6	105.2	106.8	104.1		109.9	113.2	109.6	108.0	108.4	109.1	101.6
1986	109.6	104.4	109.0	101.7	106.6	98.5		115.4	121.9	114.6	109.8	112.6	113.5	88.2
1987	113.6	107.7	113.5	104.3	108.2	101.8		120.2	130.0	119.1	113.6	117.2	118.2	88.6
1988	118.3	111.5	118.2	107.7	110.4	105.8		125.7	138.3	124.3	118.3	122.3	123.4	89.3
1989	124.0	116.7	125.1	112.0	112.2	111.7		131.9	148.9	130.1	123.7	128.1	129.0	94.3
1990	130.7	122.8	132.4	117.4	113.4	119.9		139.2	162.7	136.8	130.3	134.7	135.5	102.1
1989: Jan	121.1	113.9	122.2	109.2	112.5	107.1		128.9	143.5	127.3	120.8	125.5	126.4	89.0
Feb	121.6	114.3	122.9	109.5	112.4	107.6		129.4	145.1	127.8	121.3	126.0	126.9	89.3
Mar	122.3	115.2	123.5	110.5	111.9	109.4		130.0	145.9	128.3	122.0	126.7	127.6	89.8
Apr	123.1	116.7	124.2	112.5	111.8	112.8		130.2	146.4	128.5	122.9	127.1	128.0	94.9
May	123.8	117.5	124.9	113.2	111.9	113.9		130.8	146.9	129.1	123.5	127.6	128.3	97.4
June	124.1	117.2	125.0	112.8	112.1	113.1		131.6	147.9	129.9	123.9	127.7	128.5	99.0
July	124.4	117.0	125.5	112.1	111.9	112.2		132.5	149.3	130.8	124.2	128.2	129.0	98.5
Aug	124.6	116.7	125.8	111.6	111.4	111.5		133.1	150.4	131.3	124.3	128.5	129.3	97.0
Sept	125.0	117.3	126.1	112.4	111.3	112.9		133.4	151.3	131.6	124.8	129.1	130.0	95.9
Oct	125.6	118.1	126.5	113.4	112.1	114.1		133.7	152.3	131.8	125.4	129.9	130.9	94.6
Nov	125.9	118.3	126.9	113.4	113.0	113.6		134.1	153.6	132.1	125.6	130.4	131.3	93.2
Dec	126.1	118.2	127.4	113.0	113.5	112.6		134.6	154.1	132.6	125.8	130.6	131.5	93.2
1990: Jan	127.4	119.9	130.4	114.1	113.8	114.2		135.4	155.7	133.4	126.7	131.5	132.0	97.6
Feb	128.0	120.6	131.3	114.6	113.7	115.0		136.0	157.2	133.9	127.3	132.3	132.8	96.4
Mar	128.7	121.1	131.5	115.4	113.4	116.5		136.9	158.5	134.7	128.1	133.3	133.9	95.5
Apr	128.9	121.4	131.3	115.9	113.1	117.4		137.1	159.4	134.9	128.4	133.5	134.2	95.7
May	129.2	121.4	131.3	115.9	113.2	117.5		137.6	160.5	135.3	128.7	133.7	134.4	96.7
June	129.9	121.6	132.0	115.8	112.9	117.6		138.8	161.5	136.5	129.4	134.2	134.8	99.5
July	130.4	121.6	132.7	115.5	113.0	117.0		139.9	163.4	137.5	130.0	134.8	135.5	98.9
Aug	131.6	122.8	132.9	117.2	112.9	119.9		140.9	165.0	138.5	131.3	135.6	136.4	103.6
Sept	132.7	124.6	133.2	119.8	112.8	124.1		141.4	165.8	139.0	132.6	136.3	137.2	108.8
Oct	133.5	126.1	133.6	121.8	113.6	126.8		141.7	167.2	139.1	133.5	136.9	137.8	111.4
Nov	133.8	126.3	134.0	121.8	114.1	126.6		142.0	168.6	139.4	133.7	137.2	138.2	110.9
Dec	133.8	126.0	134.2	121.4	114.5	125.7		142.3	169.3	139.7	133.7	137.4	138.3	110.1

[1] Household fuels—gas (piped), electricity, fuel oil, etc.—and motor fuel. Motor oil, coolant, etc. also included through 1982.

Note.—Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers. See also Note, Table B–58.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-61.—*Changes in special consumer price indexes, 1958–90*

[Percent change]

Year or month	All items		All items less food		All items less energy		All items less food and energy		All items less food, shelter, and energy	
	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year
1958	1.8	2.8	1.8	2.1	2.1	2.8	1.7	2.4	....	....
1959	1.7	.7	2.1	2.1	1.3	.7	2.0	2.0	....	....
1960	1.4	1.7	1.0	1.7	1.3	1.7	1.0	1.3	....	....
1961	.7	1.0	1.3	1.0	.7	1.0	1.3	1.3	....	....
1962	1.3	1.0	1.0	1.0	1.3	1.3	1.3	1.3	....	....
1963	1.6	1.3	1.6	1.3	1.9	1.3	1.6	1.3	....	....
1964	1.0	1.3	1.0	1.3	1.3	1.6	1.2	1.6	....	....
1965	1.9	1.6	1.6	1.6	1.9	1.6	1.5	1.2	....	....
1966	3.5	2.9	3.5	2.2	3.4	3.1	3.3	2.4	....	....
1967	3.0	3.1	3.3	3.4	3.2	2.7	3.8	3.6	....	....
1968	4.7	4.2	5.0	4.5	4.9	4.4	5.1	4.6	4.6	4.7
1969	6.2	5.5	5.6	5.4	6.5	5.8	6.2	5.8	5.1	4.7
1970	5.6	5.7	6.6	6.0	5.4	6.1	6.6	6.3	5.8	5.2
1971	3.3	4.4	3.0	4.6	3.4	4.2	3.1	4.7	3.1	4.9
1972	3.4	3.2	2.9	2.9	3.5	3.3	3.0	3.0	2.7	2.4
1973	8.7	6.2	5.6	4.0	8.2	6.2	4.7	3.6	3.5	2.9
1974	12.3	11.0	12.2	9.8	11.7	9.8	11.1	8.3	11.3	7.7
1975	6.9	9.1	7.3	9.4	6.6	8.9	6.7	9.1	6.4	8.9
1976	4.9	5.8	6.1	6.7	4.8	5.6	6.1	6.5	6.9	7.1
1977	6.7	6.5	6.4	6.4	6.7	6.4	6.5	6.3	5.3	6.0
1978	9.0	7.6	8.3	7.2	9.1	7.8	8.5	7.4	6.4	5.6
1979	13.3	11.3	14.0	11.4	11.1	10.0	11.3	9.8	7.3	6.9
1980	12.5	13.5	13.0	14.5	11.7	11.6	12.2	12.4	9.8	8.8
1981	8.9	10.3	9.8	10.9	8.5	10.0	9.5	10.4	9.4	9.6
1982	3.8	6.2	4.1	6.5	4.2	6.7	4.5	7.4	6.1	7.7
1983	3.8	3.2	4.1	3.5	4.5	3.6	4.8	4.0	5.0	5.2
1984	3.9	4.3	3.9	4.3	4.4	4.7	4.7	5.0	4.3	5.0
1985	3.8	3.6	4.1	3.8	4.0	3.9	4.3	4.3	3.7	3.8
1986	1.1	1.9	.5	1.7	3.8	3.9	3.8	4.0	3.3	3.4
1987	4.4	3.6	4.6	3.5	4.1	4.1	4.2	4.1	3.8	3.8
1988	4.4	4.1	4.2	4.1	4.7	4.4	4.7	4.4	4.7	4.2
1989	4.6	4.8	4.5	4.6	4.6	4.7	4.4	4.5	4.1	4.4
1990	6.1	5.4	6.3	5.3	5.2	5.2	5.2	5.0	5.2	4.9
	Change from preceding period									
	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted
1989: Jan	0.5	0.6	0.3	0.6	0.6	0.6	0.3	0.6	0.3	0.6
Feb	.4	.4	.4	.3	.4	.3	.4	.3	.4	.4
Mar	.6	.5	.6	.5	.6	.5	.6	.5	.5	.3
Apr	.7	.7	.7	.7	.3	.3	.3	.2	.4	.3
May	.6	.4	.5	.4	.4	.4	.2	.4	.2	.4
June	.2	.2	.3	.2	.1	.3	.2	.3	0	.2
July	.2	.3	.2	.3	.4	.4	.4	.4	0	.2
Aug	.2	0	.1	−.1	.2	.2	.2	.2	.2	.1
Sept	.3	.2	.4	.2	.5	.3	.5	.3	.9	.4
Oct	.5	.5	.5	.5	.6	.5	.7	.5	.7	.4
Nov	.2	.3	.2	.3	.4	.4	.3	.4	.4	.4
Dec	.2	.4	.2	.4	.2	.4	.2	.3	0	.3
1990: Jan	1.0	1.1	.7	1.0	.7	.8	.4	.6	.3	.5
Feb	.5	.5	.5	.5	.6	.6	.6	.5	.8	.8
Mar	.5	.5	.6	.5	.8	.5	.8	.7	.8	.5
Apr	.2	.2	.2	.2	.2	.2	.2	.2	.3	.3
May	.2	.2	.2	.2	.1	.1	.1	.3	.2	.2
June	.5	.5	.5	.5	.4	.6	.3	.4	0	.2
July	.4	.4	.5	.5	.4	.5	.5	.6	.2	.5
Aug	.9	.8	1.0	.8	.6	.4	.7	.5	.5	.4
Sept	.8	.8	1.0	.8	.5	.4	.6	.3	1.0	.4
Oct	.6	.6	.7	.7	.4	.3	.4	.3	.7	.4
Nov	.2	.3	.1	.3	.2	.3	.3	.3	.3	.3
Dec	0	.3	0	.4	.1	.4	.1	.4	.1	.4

[1] Changes from December to December are based on unadjusted indexes.

Note.—Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers. See also Note, Table B-58.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–62.—*Changes in consumer price indexes, commodities and services, 1929–90*

[Percent change]

Year	All items		Commodities						Services				Energy[2]	
			Total		Food		Commodities less food		Total		Medical care services			
	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year
1929	0.6	0	....	....	2.5	1.2	....	....	....	....	....	....	....	....
1933	.8	−5.1	....	....	6.9	−2.8	....	....	....	....	....	....	....	....
1939	0	−1.4	−0.7	−2.0	−2.5	−2.5	0.5	−1.6	0	0	1.2	1.2	....	....
1940	.7	.7	1.4	.7	2.5	1.7	.5	.5	.8	.8	0	0	....	....
1941	9.9	5.0	13.3	6.7	15.7	9.2	10.7	5.4	2.4	.8	1.2	0	....	....
1942	9.0	10.9	12.9	14.5	17.9	17.6	6.3	10.8	2.3	3.1	3.5	3.5	....	....
1943	3.0	6.1	4.2	9.3	3.0	11.0	5.5	4.6	2.3	2.3	5.6	4.5	....	....
1944	2.3	1.7	2.0	1.0	0	−1.2	4.7	5.3	2.2	2.2	3.2	4.3	....	....
1945	2.2	2.3	2.9	3.0	3.5	2.4	3.3	4.2	.7	1.5	3.1	3.1	....	....
1946	18.1	8.3	24.8	10.6	31.3	14.5	12.7	6.0	3.6	1.4	9.0	5.1	....	....
1947	8.8	14.4	10.3	20.5	11.3	21.7	9.2	12.9	5.6	4.3	6.4	8.7	....	....
1948	3.0	8.1	1.7	7.2	−.8	8.3	5.2	7.4	5.9	6.1	6.9	7.1	....	....
1949	−2.1	−1.2	−4.1	−2.7	−3.9	−4.2	−4.6	−1.3	3.7	5.1	1.6	3.3	....	....
1950	5.9	1.3	7.8	.7	9.8	1.6	5.5	−.3	3.6	3.0	4.0	2.4	....	....
1951	6.0	7.9	5.9	9.0	7.1	11.0	4.9	7.6	5.2	5.3	5.3	4.7	....	....
1952	.8	1.9	−.9	1.3	−1.0	1.8	−.6	.9	4.4	4.5	5.8	6.7	....	....
1953	.7	.8	−.3	−.3	−1.1	−1.4	.3	.3	4.2	4.3	3.4	3.5	....	....
1954	−.7	.7	−1.6	−.9	−1.8	−.4	−1.5	−1.2	2.0	3.1	2.6	3.4	....	....
1955	.4	−.4	−.3	−.9	−.7	−1.4	0	−.6	2.0	2.0	3.2	2.6	....	....
1956	3.0	1.5	2.6	1.0	2.9	.7	2.7	.9	3.4	2.5	3.8	3.8	....	....
1957	2.9	3.3	2.8	3.2	2.8	3.2	2.0	2.9	4.2	4.3	4.8	4.3	....	....
1958	1.8	2.8	1.2	2.1	2.4	4.5	.8	1.1	2.7	3.7	4.6	5.3	−0.9	0
1959	1.7	.7	.6	0	−1.0	−1.7	1.4	1.4	3.9	3.1	4.9	4.5	4.7	1.9
1960	1.4	1.7	1.2	.9	3.1	1.0	−.3	.6	2.5	3.4	3.7	4.3	1.3	2.3
1961	.7	1.0	0	.6	−.7	1.3	.8	.3	2.1	1.7	3.5	3.6	−1.3	.4
1962	1.3	1.0	.9	.9	1.3	.7	.6	.6	1.6	2.0	2.9	3.5	2.2	.4
1963	1.6	1.3	1.5	.9	2.0	1.6	1.4	.8	2.4	2.0	2.8	2.9	−.9	0
1964	1.0	1.3	.9	1.2	1.3	1.3	.3	.8	1.6	2.0	2.3	2.3	0	−.4
1965	1.9	1.6	1.4	1.1	3.5	2.2	.8	.8	2.7	2.3	3.6	3.2	1.8	1.8
1966	3.5	2.9	2.5	2.6	4.0	5.0	1.9	1.3	4.8	3.8	8.3	5.3	1.7	1.7
1967	3.0	3.1	2.5	1.9	1.2	.9	3.1	2.4	4.3	4.3	8.0	8.8	1.7	2.1
1968	4.7	4.2	4.0	3.5	4.4	3.5	3.6	3.6	5.8	5.2	7.1	7.3	1.7	1.7
1969	6.2	5.5	5.4	4.7	7.0	5.1	4.7	4.3	7.7	6.9	7.3	8.2	2.9	2.5
1970	5.6	5.7	3.9	4.5	2.3	5.7	4.7	4.1	8.1	8.0	8.1	7.0	4.8	2.8
1971	3.3	4.4	2.8	3.6	4.3	3.1	2.2	3.9	4.1	5.7	5.4	7.4	3.1	3.9
1972	3.4	3.2	3.4	3.0	4.6	4.2	2.6	2.2	3.4	3.8	3.7	3.5	2.6	2.6
1973	8.7	6.2	10.4	7.4	20.3	14.5	4.9	3.5	6.2	4.4	6.0	4.5	17.0	8.1
1974	12.3	11.0	12.8	11.9	12.0	14.3	13.2	10.7	11.4	9.2	13.2	10.4	21.6	29.6
1975	6.9	9.1	6.2	8.8	6.6	8.5	6.1	9.1	8.2	9.6	10.3	12.6	11.4	10.5
1976	4.9	5.8	3.3	4.3	.5	3.0	5.1	5.0	7.2	8.3	10.8	10.1	7.1	7.1
1977	6.7	6.5	6.1	5.8	8.1	6.3	4.8	5.5	8.0	7.7	9.0	9.9	7.2	9.5
1978	9.0	7.6	8.8	7.2	11.8	9.9	7.7	5.8	9.3	8.6	9.3	8.5	7.9	6.3
1979	13.3	11.3	13.0	11.3	10.2	11.0	14.3	11.6	13.6	11.0	10.5	9.8	37.5	25.1
1980	12.5	13.5	11.0	12.3	10.2	8.6	11.5	13.8	14.2	15.4	10.1	11.3	18.0	30.9
1981	8.9	10.3	6.0	8.4	4.3	7.8	6.7	8.6	13.0	13.1	12.6	10.7	11.9	13.6
1982	3.8	6.2	3.6	4.1	3.1	4.1	3.8	4.1	4.3	9.0	11.2	11.8	1.3	1.5
1983	3.8	3.2	2.9	2.9	2.7	2.1	3.1	3.2	4.8	3.5	6.2	8.7	−.5	.7
1984	3.9	4.3	2.7	3.4	3.8	3.8	2.1	3.1	5.4	5.2	5.8	6.0	.2	1.0
1985	3.8	3.6	2.5	2.1	2.6	2.3	2.4	2.0	5.1	5.1	6.8	6.1	1.8	.7
1986	1.1	1.9	−2.0	−.9	3.8	3.2	−5.3	−3.3	4.5	5.0	7.9	7.7	−19.7	−13.2
1987	4.4	3.6	4.6	3.2	3.5	4.1	5.1	2.6	4.3	4.2	5.6	6.6	8.2	.5
1988	4.4	4.1	3.8	3.5	5.2	4.1	3.2	3.3	4.8	4.6	6.9	6.4	.5	.8
1989	4.6	4.8	4.1	4.7	5.6	5.8	3.3	4.0	5.1	4.9	8.6	7.7	5.1	5.6
1990	6.1	5.4	6.6	5.2	5.3	5.8	7.4	4.8	5.7	5.5	9.9	9.3	18.1	8.3

[1] Changes from December to December are based on unadjusted indexes.

[2] Household fuels—gas (piped) electricity, fuel oil, etc.—and motor fuel. Motor oil, coolant, etc. also included through 1982.

Note.—Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers. See also Note, Table B–58.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-63.—*Producer price indexes by stage of processing, 1947–90*

[1982=100]

Year or month	Finished goods									
	Total finished goods	Consumer foods			Finished goods excluding consumer foods					Total finished consumer goods
		Total	Crude	Processed	Total	Consumer goods			Capital equipment	
						Total	Durable	Nondurable		
1947	26.4	31.9	39.3	31.1	....	27.4	32.9	24.2	19.8	28.6
1948	28.5	34.9	42.4	34.0	....	29.2	35.2	25.7	21.6	30.8
1949	27.7	32.1	40.1	31.1	....	28.6	36.1	24.7	22.7	29.4
1950	28.2	32.7	36.5	32.4	....	29.0	36.5	25.1	23.2	29.9
1951	30.8	36.7	41.9	36.2	....	31.1	38.9	27.0	25.5	32.7
1952	30.6	36.4	44.6	35.4	....	30.7	39.2	26.3	25.9	32.3
1953	30.3	34.5	41.6	33.6	....	31.0	39.5	26.6	26.3	31.7
1954	30.4	34.2	37.5	34.0	....	31.1	39.8	26.7	26.7	31.7
1955	30.5	33.4	39.1	32.7	....	31.3	40.2	26.8	27.4	31.5
1956	31.3	33.3	39.1	32.7	....	32.1	41.6	27.3	29.5	32.0
1957	32.5	34.4	38.5	34.1	....	32.9	42.8	27.9	31.3	32.9
1958	33.2	36.5	41.0	36.1	....	32.9	43.4	27.8	32.1	33.6
1959	33.1	34.8	37.3	34.7	....	33.3	43.9	28.2	32.7	33.3
1960	33.4	35.5	39.8	35.2	....	33.5	43.8	28.4	32.8	33.6
1961	33.4	35.4	38.0	35.3	....	33.4	43.6	28.4	32.9	33.6
1962	33.5	35.7	38.4	35.6	....	33.4	43.4	28.4	33.0	33.7
1963	33.4	35.3	37.8	35.2	....	33.4	43.1	28.5	33.1	33.5
1964	33.5	35.4	38.9	35.2	....	33.3	43.3	28.4	33.4	33.6
1965	34.1	36.8	39.0	36.8	....	33.6	43.2	28.8	33.8	34.2
1966	35.2	39.2	41.5	39.2	....	34.1	43.4	29.3	34.6	35.4
1967	35.6	38.5	39.6	38.8	35.0	34.7	44.1	30.0	35.8	35.6
1968	36.6	40.0	42.5	40.0	35.9	35.5	45.1	30.6	37.0	36.5
1969	38.0	42.4	45.9	42.3	36.9	36.3	45.9	31.5	38.3	37.9
1970	39.3	43.8	46.0	43.9	38.2	37.4	47.2	32.5	40.1	39.1
1971	40.5	44.5	45.8	44.7	39.6	38.7	48.9	33.5	41.7	40.2
1972	41.8	46.9	48.0	47.2	40.4	39.4	50.0	34.1	42.8	41.5
1973	45.6	56.5	63.6	55.8	42.0	41.2	50.9	36.1	44.2	46.0
1974	52.6	64.4	71.6	63.9	48.8	48.2	55.5	44.0	50.5	53.1
1975	58.2	69.8	71.7	70.3	54.7	53.2	61.0	48.9	58.2	58.2
1976	60.8	69.6	76.7	69.0	58.1	56.5	63.7	52.4	62.1	60.4
1977	64.7	73.3	79.5	72.7	62.2	60.6	67.4	56.8	66.1	64.3
1978	69.8	79.9	85.8	79.4	66.7	64.9	73.6	60.0	71.3	69.4
1979	77.6	87.3	92.3	86.8	74.6	73.5	80.8	69.3	77.5	77.5
1980	88.0	92.4	93.9	92.3	86.7	87.1	91.0	85.1	85.8	88.6
1981	96.1	97.8	104.4	97.2	95.6	96.1	96.4	95.8	94.6	96.6
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	101.6	101.0	102.4	100.9	101.8	101.2	102.8	100.5	102.8	101.3
1984	103.7	105.4	111.4	104.9	103.2	102.2	104.5	101.1	105.2	103.3
1985	104.7	104.6	102.9	104.8	104.6	103.3	106.5	101.7	107.5	103.8
1986	103.2	107.3	105.6	107.4	101.9	98.5	108.9	93.3	109.7	101.4
1987	105.4	109.5	107.1	109.6	104.0	100.7	111.5	94.9	111.7	103.6
1988	108.0	112.6	109.8	112.7	106.5	103.1	113.8	97.3	114.3	106.2
1989	113.6	118.7	119.6	118.6	111.8	108.9	117.6	103.8	118.8	112.1
1990 [1]	119.2	124.4	123.2	124.4	117.4	115.2	120.4	111.5	122.9	118.2
1989: Jan	111.1	116.7	119.6	116.4	109.2	105.8	116.6	100.0	117.1	109.4
Feb	111.7	117.2	123.8	116.7	109.9	106.6	117.0	100.9	117.5	110.1
Mar	112.1	118.3	128.3	117.5	110.0	106.8	116.6	101.3	117.5	110.6
Apr	113.0	117.7	119.6	117.5	111.4	108.8	116.4	104.2	117.6	111.8
May	114.2	119.1	128.9	118.3	112.6	110.3	117.1	106.0	118.3	113.2
June	114.3	118.6	119.0	118.5	112.8	110.4	117.5	106.0	118.8	113.1
July	114.1	119.0	119.0	119.0	112.4	109.8	116.9	105.3	118.7	112.8
Aug	113.4	118.7	113.0	119.0	111.7	108.5	117.0	103.5	119.0	111.9
Sept	113.6	118.5	109.0	119.1	112.0	109.1	116.7	104.5	118.9	112.2
Oct	114.9	119.5	120.8	119.3	113.3	110.3	120.0	104.8	120.5	113.3
Nov	114.9	120.1	115.3	120.4	113.1	109.9	119.6	104.3	120.8	113.2
Dec	115.4	121.1	119.2	121.2	113.5	110.4	119.7	105.0	120.8	113.9
1990: Jan	117.6	123.9	148.8	122.0	115.5	113.2	119.1	109.2	121.2	116.7
Feb	117.4	124.6	152.7	122.5	115.1	112.4	119.4	107.9	121.6	116.4
Mar	117.2	124.4	138.6	123.3	114.8	111.8	119.2	107.1	121.9	115.9
Apr	117.2	123.2	118.7	123.5	115.2	112.2	119.3	107.7	122.2	115.8
May	117.7	124.5	112.9	125.3	115.5	112.7	119.4	108.3	122.2	116.5
June	117.8	124.2	108.6	125.3	115.7	112.9	120.3	108.3	122.5	116.6
July	118.2	124.9	113.4	125.7	116.0	113.2	120.4	108.6	122.8	117.0
Aug [1]	119.3	124.9	112.1	125.8	117.4	115.1	119.9	111.5	123.1	118.3
Sept	120.3	124.1	109.8	125.1	119.1	117.7	119.9	115.1	122.9	119.8
Oct	122.3	124.6	116.0	125.2	121.5	120.6	122.6	118.0	124.5	121.9
Nov	122.9	125.1	127.7	124.9	122.1	121.3	122.8	119.0	124.7	122.6
Dec	121.9	124.1	119.6	124.4	121.1	119.8	122.8	116.8	124.9	121.2

See next page for continuation of table.

TABLE B-63.—*Producer price indexes by stage of processing, 1947–90*—Continued

[1982=100]

Year or month	Intermediate materials, supplies, and components								Crude materials for further processing				
	Total	Foods and feeds [2]	Other	Materials and components		Processed fuels and lubricants	Containers	Supplies	Total	Foodstuffs and feedstuffs	Other		
				For manufacturing	For construction						Total	Fuel	Other
1947	23.3	....	22.2	24.9	22.5	14.4	23.4	28.5	31.7	45.1	....	7.5	24.0
1948	25.2	....	24.1	26.8	24.9	16.4	24.4	29.8	34.7	48.8	....	8.9	26.7
1949	24.2	....	23.5	25.7	24.9	14.9	24.5	28.0	30.1	40.5	....	8.8	24.3
1950	25.3	....	24.6	26.9	26.2	15.2	25.2	29.0	32.7	43.4	....	8.8	27.8
1951	28.4	....	27.6	30.5	28.7	15.9	29.6	32.6	37.6	50.2	....	9.0	32.0
1952	27.5	....	26.7	29.3	28.5	15.7	28.0	32.6	34.5	47.3	....	9.0	27.8
1953	27.7	....	27.0	29.7	29.0	15.8	28.0	31.0	31.9	42.3	....	9.3	26.6
1954	27.9	....	27.2	29.8	29.1	15.8	28.5	31.7	31.6	42.3	....	8.9	26.1
1955	28.4	....	28.0	30.5	30.3	15.8	28.9	31.2	30.4	38.4	....	8.9	27.5
1956	29.6	....	29.3	32.0	31.8	16.3	31.0	32.0	30.6	37.6	....	9.5	28.6
1957	30.3	....	30.1	32.7	32.0	17.2	32.4	32.3	31.2	39.2	....	10.1	28.2
1958	30.4	....	30.1	32.8	32.0	16.2	33.2	33.1	31.9	41.6	....	10.2	27.1
1959	30.8	....	30.5	33.3	32.9	16.2	33.0	33.5	31.1	38.8	....	10.4	28.1
1960	30.8	....	30.7	33.3	32.7	16.6	33.4	33.3	30.4	38.4	....	10.5	26.9
1961	30.6	....	30.3	32.9	32.2	16.8	33.2	33.7	30.2	37.9	....	10.5	27.2
1962	30.6	....	30.2	32.7	32.1	16.7	33.6	34.5	30.5	38.6	....	10.4	27.1
1963	30.7	....	30.1	32.7	32.2	16.6	33.2	35.0	29.9	37.5	....	10.5	26.7
1964	30.8	....	30.3	33.1	32.5	16.2	32.9	34.7	29.6	36.6	....	10.5	27.2
1965	31.2	....	30.7	33.6	32.8	16.5	33.5	35.0	31.1	39.2	....	10.6	27.7
1966	32.0	....	31.3	34.3	33.6	16.8	34.5	36.5	33.1	42.7	....	10.9	28.3
1967	32.2	41.8	31.7	34.5	34.0	16.9	35.0	36.8	31.3	40.3	21.1	11.3	26.5
1968	33.0	41.5	32.5	35.3	35.7	16.5	35.9	37.1	31.8	40.9	21.6	11.5	27.1
1969	34.1	42.9	33.6	36.5	37.7	16.6	37.2	37.8	33.9	44.1	22.5	12.0	28.4
1970	35.4	45.6	34.8	38.0	38.3	17.7	39.0	39.7	35.2	45.2	23.8	13.8	29.1
1971	36.8	46.7	36.2	38.9	40.8	19.5	40.8	40.8	36.0	46.1	24.7	15.7	29.4
1972	38.2	49.5	37.7	40.4	43.0	20.1	42.7	42.5	39.9	51.5	27.0	16.8	32.3
1973	42.4	70.3	40.6	44.1	46.5	22.2	45.2	51.7	54.5	72.6	34.3	18.6	42.9
1974	52.5	83.6	50.5	56.0	55.0	33.6	53.3	56.8	61.4	76.4	44.1	24.8	54.5
1975	58.0	81.6	56.6	61.7	60.1	39.4	60.0	61.8	61.6	77.4	43.7	30.6	50.0
1976	60.9	77.4	60.0	64.0	64.1	42.3	63.1	65.8	63.4	76.8	48.2	34.5	54.9
1977	64.9	79.6	64.1	67.4	69.3	47.7	65.9	69.3	65.5	77.5	51.7	42.0	56.3
1978	69.5	84.8	68.6	72.0	76.5	49.9	71.0	72.9	73.4	87.3	57.5	48.2	61.9
1979	78.4	94.5	77.4	80.9	84.2	61.6	79.4	80.2	85.9	100.0	69.6	57.3	75.5
1980	90.3	105.5	89.4	91.7	91.3	85.0	89.1	89.9	95.3	104.6	84.6	69.4	91.8
1981	98.6	104.6	98.2	98.7	97.9	100.6	96.7	96.9	103.0	103.9	101.8	84.8	109.8
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	100.6	103.6	100.5	101.2	102.8	95.4	100.4	101.8	101.3	101.8	100.7	105.1	98.8
1984	103.1	105.7	103.0	104.1	105.6	95.7	105.9	104.1	103.5	104.7	102.2	105.1	101.0
1985	102.7	97.3	103.0	103.3	107.3	92.8	109.0	104.4	95.8	94.8	96.9	102.7	94.3
1986	99.1	96.2	99.3	102.2	108.1	72.7	110.3	105.6	87.7	93.2	81.6	92.2	76.0
1987	101.5	99.2	101.7	105.3	109.8	73.3	114.5	107.7	93.7	96.2	87.9	84.1	88.5
1988	107.1	109.5	106.9	113.2	116.1	71.2	120.1	113.7	96.0	106.1	85.5	82.1	85.9
1989	112.0	113.8	111.9	118.1	121.3	76.4	125.4	118.1	103.1	111.2	93.4	85.3	95.8
1990 [1]	114.5	113.4	114.5	118.7	122.9	85.8	127.7	119.4	108.9	113.2	101.3	84.6	107.3
1989: Jan	110.6	115.6	110.4	118.0	119.4	71.6	123.1	117.2	101.4	112.5	90.0	85.6	90.9
Feb	111.0	114.0	110.8	118.3	119.9	72.1	123.9	117.4	101.2	111.0	90.7	86.7	91.3
Mar	111.5	115.2	111.4	118.7	120.5	73.2	124.4	118.0	103.2	113.7	92.2	83.8	94.6
Apr	112.4	113.7	112.3	118.9	121.1	76.7	125.1	118.0	104.4	111.6	95.3	84.8	98.7
May	112.7	114.2	112.6	118.9	121.5	78.1	125.3	118.2	106.1	114.9	96.0	86.3	99.0
June	112.7	112.9	112.7	118.4	121.5	79.3	125.6	118.1	104.1	111.7	94.7	86.1	97.3
July	112.5	114.5	112.4	118.1	121.6	78.7	126.0	118.5	103.9	110.1	95.4	86.6	98.1
Aug	112.0	113.1	112.0	117.7	121.6	77.3	126.0	118.3	101.1	110.0	91.1	83.6	93.3
Sept	112.4	113.7	112.3	117.7	121.9	78.7	126.1	118.5	102.3	108.9	93.6	85.7	95.8
Oct	112.3	112.3	112.4	117.9	122.3	77.8	126.3	118.3	102.1	107.9	94.0	84.1	97.1
Nov	112.0	113.2	111.9	117.7	122.1	76.3	126.8	118.3	102.6	109.9	93.5	84.9	96.0
Dec	111.9	113.0	111.9	117.4	121.7	77.3	126.7	118.3	104.2	112.6	94.3	85.5	97.0
1990: Jan	113.4	113.2	113.4	117.6	121.8	84.2	127.3	118.8	106.5	113.5	97.5	86.8	101.0
Feb	112.5	111.0	112.5	117.5	121.9	79.4	127.4	118.5	106.8	113.9	97.6	87.3	100.8
Mar	112.4	111.4	112.5	117.9	122.5	77.8	127.4	118.7	105.6	115.3	94.9	86.0	97.6
Apr	112.8	112.5	112.8	118.2	123.0	78.0	127.8	118.9	103.0	115.1	91.0	84.7	92.7
May	113.1	115.9	112.9	118.4	123.2	78.4	127.7	119.4	104.7	117.0	92.5	84.8	94.6
June	113.1	115.5	113.0	118.3	122.8	79.4	127.6	119.2	101.2	115.6	88.0	83.0	89.0
July	113.1	116.0	113.0	118.5	123.0	78.7	127.5	119.5	101.4	115.4	88.3	86.8	87.8
Aug [1]	114.4	114.9	114.4	118.7	123.0	85.7	127.5	119.4	110.2	113.2	103.4	80.4	112.0
Sept	116.3	113.9	116.4	119.3	123.2	94.0	127.6	119.7	115.1	110.8	112.4	81.6	124.3
Oct	117.8	113.0	118.1	120.0	123.5	100.4	127.7	120.0	124.6	110.9	127.2	81.6	145.2
Nov	117.8	111.3	118.2	120.1	123.4	99.9	128.2	120.1	116.8	108.6	116.5	84.2	128.9
Dec	116.7	111.6	117.0	119.8	123.5	94.0	128.3	120.3	110.5	108.5	106.7	88.3	113.3

[1] Data have been revised through August 1990 to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

[2] Intermediate materials for food manufacturing and feeds.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–64.—*Producer price indexes by stage of processing, special groups, 1974–90*

[1982=100]

Year or month	Finished goods						Intermediate materials, supplies, and components				Crude materials for further processing			
	Total	Foods	Energy	Excluding foods and energy			Total	Foods and feeds[1]	Energy	Other	Total	Foodstuffs and feedstuffs	Energy	Other
				Total	Capital equipment	Consumer goods excluding foods and energy								
1974	52.6	64.4	26.2	53.6	50.5	55.5	52.5	83.6	33.1	54.0	61.4	76.4	27.8	83.3
1975	58.2	69.8	30.7	59.7	58.2	60.6	58.0	81.6	38.7	60.2	61.6	77.4	33.3	69.3
1976	60.8	69.6	34.3	63.1	62.1	63.7	60.9	77.4	41.5	63.8	63.4	76.8	35.3	80.2
1977	64.7	73.3	39.7	66.9	66.1	67.3	64.9	79.6	46.8	67.6	65.5	77.5	40.4	79.8
1978	69.8	79.9	42.3	71.9	71.3	72.2	69.5	84.8	49.1	72.5	73.4	87.3	45.2	87.8
1979	77.6	87.3	57.1	78.3	77.5	78.8	78.4	94.5	61.1	80.7	85.9	100.0	54.9	106.2
1980	88.0	92.4	85.2	87.1	85.8	87.8	90.3	105.5	84.9	90.3	95.3	104.6	73.1	113.1
1981	96.1	97.8	101.5	94.6	94.6	94.6	98.6	104.6	100.5	97.7	103.0	103.9	97.7	111.7
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	101.6	101.0	95.2	103.0	102.8	103.1	100.6	103.6	95.3	101.6	101.3	101.8	98.7	105.3
1984	103.7	105.4	91.2	105.5	105.2	105.7	103.1	105.7	95.5	104.7	103.5	104.7	98.0	111.7
1985	104.7	104.6	87.6	108.1	107.5	108.4	102.7	97.3	92.6	105.2	95.8	94.8	93.3	104.9
1986	103.2	107.3	63.0	110.6	109.7	111.1	99.1	96.2	72.6	104.9	87.7	93.2	71.8	103.1
1987	105.4	109.5	61.8	113.3	111.7	114.2	101.5	99.2	73.0	107.8	93.7	96.2	75.0	115.7
1988	108.0	112.6	59.8	117.0	114.3	118.5	107.1	109.5	70.9	115.2	96.0	106.1	67.7	133.0
1989	113.6	118.7	65.7	122.1	118.8	124.0	112.0	113.8	76.1	120.2	103.1	111.2	75.9	137.9
1990 [2]	119.2	124.4	74.9	126.6	122.9	128.8	114.5	113.4	85.4	120.9	108.9	113.2	85.7	136.4
1989: Jan	111.1	116.7	60.8	120.1	117.1	121.9	110.6	115.6	71.2	119.6	101.4	112.5	71.2	140.3
Feb	111.7	117.2	61.8	120.7	117.5	122.6	111.0	114.0	71.8	119.9	101.2	111.0	72.0	140.3
Mar	112.1	118.3	62.3	120.7	117.5	122.6	111.5	115.2	72.9	120.3	103.2	113.7	73.5	141.3
Apr	113.0	117.7	68.4	120.8	117.6	122.7	112.4	113.7	76.4	120.7	104.4	111.6	77.3	141.2
May	114.2	119.1	71.8	121.4	118.3	123.3	112.7	114.2	77.7	120.8	106.1	114.9	78.3	140.3
June	114.3	118.6	70.2	122.1	118.8	124.1	112.7	112.9	78.9	120.5	104.1	111.7	77.5	137.9
July	114.1	119.0	68.4	122.1	118.7	124.1	112.5	114.5	78.3	120.2	103.9	110.1	78.9	135.5
Aug	113.4	118.7	63.6	122.4	119.0	124.5	112.0	113.1	76.9	120.0	101.1	110.0	73.5	136.6
Sept	113.6	118.5	65.9	122.3	118.9	124.2	112.4	113.7	78.3	120.1	102.3	108.9	76.1	137.7
Oct	114.9	119.5	65.8	123.9	120.5	126.0	112.3	112.3	77.5	120.3	102.1	107.9	76.6	137.6
Nov	114.9	120.1	64.6	124.0	120.8	125.9	112.0	113.2	76.0	120.0	102.6	109.9	76.9	134.3
Dec	115.4	121.1	64.8	124.4	120.8	126.5	111.9	113.0	76.9	119.7	104.2	112.6	78.5	132.0
1990: Jan	117.6	123.9	72.7	124.8	121.2	127.0	113.4	113.2	83.7	120.0	106.5	113.5	82.3	132.1
Feb	117.4	124.6	69.2	125.2	121.6	127.4	112.5	111.0	79.0	120.0	106.8	113.9	82.6	131.3
Mar	117.2	124.4	67.0	125.4	121.9	127.5	112.4	111.4	77.4	120.3	105.6	115.3	78.6	134.2
Apr	117.2	123.2	68.0	125.6	122.2	127.7	112.8	112.5	77.7	120.6	103.0	115.1	73.1	137.8
May	117.7	124.5	68.5	125.9	122.2	128.1	113.1	115.9	78.0	120.7	104.7	117.0	74.5	138.8
June	117.8	124.2	67.6	126.4	122.5	128.8	113.1	115.5	79.0	120.5	101.2	115.6	69.4	137.8
July	118.2	124.9	68.1	126.7	122.8	129.0	113.1	116.0	78.4	120.6	101.4	115.4	69.7	138.2
Aug [2]	119.3	124.9	74.2	126.7	123.1	128.9	114.4	114.9	85.3	120.8	110.2	113.2	87.2	140.4
Sept	120.3	124.1	82.0	126.8	122.9	129.0	116.3	113.9	93.5	121.4	115.1	110.8	97.9	140.6
Oct	122.3	124.6	88.1	128.1	124.5	130.3	117.8	113.0	99.9	122.1	124.6	110.9	116.2	137.9
Nov	122.9	125.1	89.4	128.5	124.7	130.8	117.8	111.3	99.6	122.2	116.8	108.6	104.2	134.8
Dec	121.9	124.1	84.1	128.8	124.9	131.1	116.7	111.6	93.7	122.0	110.5	108.5	93.1	132.5

[1] Intermediate materials for food manufacturing and feeds.

[2] Data have been revised through August 1990 to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-65.—*Producer price indexes for major commodity groups, 1947–90*

[1982=100]

Year or month	Farm products and processed foods and feeds			Industrial commodities				
	Total	Farm products	Processed foods and feeds	Total	Textile products and apparel	Hides, skins, leather, and related products	Fuels and related products, and power [1]	Chemicals and allied products [1]
1947	37.9	45.1	33.0	22.7	50.6	31.7	11.1	32.1
1948	40.8	48.5	35.3	24.6	52.8	32.1	13.1	32.8
1949	36.0	41.9	32.1	24.1	48.3	30.4	12.4	30.0
1950	37.7	44.0	33.2	25.0	50.2	32.9	12.6	30.4
1951	43.0	51.2	36.9	27.6	56.0	37.7	13.0	34.8
1952	41.3	48.4	36.4	26.9	50.5	30.5	13.0	33.0
1953	38.6	43.8	34.8	27.2	49.3	31.0	13.4	33.4
1954	38.5	43.2	35.4	27.2	48.2	29.5	13.2	33.8
1955	36.6	40.5	33.8	27.8	48.2	29.4	13.2	33.7
1956	36.4	40.0	33.8	29.1	48.2	31.2	13.6	33.9
1957	37.7	41.1	34.8	29.9	48.3	31.2	14.3	34.6
1958	39.4	42.9	36.5	30.0	47.4	31.6	13.7	34.9
1959	37.6	40.2	35.6	30.5	48.1	35.9	13.7	34.8
1960	37.7	40.1	35.6	30.5	48.6	34.6	13.9	34.8
1961	37.7	39.7	36.2	30.4	47.8	34.9	14.0	34.5
1962	38.1	40.4	36.5	30.4	48.2	35.3	14.0	33.9
1963	37.7	39.6	36.8	30.3	48.2	34.3	13.9	33.5
1964	37.5	39.0	36.7	30.5	48.5	34.4	13.5	33.6
1965	39.0	40.7	38.0	30.9	48.8	35.9	13.8	33.9
1966	41.6	43.7	40.2	31.5	48.9	39.4	14.1	34.0
1967	40.2	41.3	39.8	32.0	48.9	38.1	14.4	34.2
1968	41.1	42.3	40.6	32.8	50.7	39.3	14.3	34.1
1969	43.4	45.0	42.7	33.9	51.8	41.5	14.6	34.2
1970	44.9	45.8	44.6	35.2	52.4	42.0	15.3	35.0
1971	45.8	46.6	45.5	36.5	53.3	43.4	16.6	35.6
1972	49.2	51.6	48.0	37.8	55.5	50.0	17.1	35.6
1973	63.9	72.7	58.9	40.3	60.5	54.5	19.4	37.6
1974	71.3	77.4	68.0	49.2	68.0	55.2	30.1	50.2
1975	74.0	77.0	72.6	54.9	67.4	56.5	35.4	62.0
1976	73.6	78.8	70.8	58.4	72.4	63.9	38.3	64.0
1977	75.9	79.4	74.0	62.5	75.3	68.3	43.6	65.9
1978	83.0	87.7	80.6	67.0	78.1	76.1	46.5	68.0
1979	92.3	99.6	88.5	75.7	82.5	96.1	58.9	76.0
1980	98.3	102.9	95.9	88.0	89.7	94.7	82.8	89.0
1981	101.1	105.2	98.9	97.4	97.6	99.3	100.2	98.4
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	102.0	102.4	101.8	101.1	100.3	103.2	95.9	100.3
1984	105.5	105.5	105.4	103.3	102.7	109.0	94.8	102.9
1985	100.7	95.1	103.5	103.7	102.9	108.9	91.4	103.7
1986	101.2	92.9	105.4	100.0	103.2	113.0	69.8	102.6
1987	103.7	95.5	107.9	102.6	105.1	120.4	70.2	106.4
1988	110.0	104.9	112.7	106.3	109.2	131.4	66.7	116.3
1989	115.4	110.9	117.8	111.6	112.3	136.3	72.9	123.0
1990 [2]	118.6	112.2	121.9	115.8	114.9	141.7	82.2	123.6
1989: Jan	115.0	112.0	116.6	109.6	111.0	131.2	68.1	123.7
Feb	114.6	110.8	116.6	110.1	111.3	133.2	68.9	124.3
Mar	116.1	113.8	117.5	110.5	111.2	136.8	69.9	124.5
Apr	115.0	111.0	117.2	111.8	111.6	136.1	74.2	124.9
May	116.8	115.1	117.9	112.4	111.8	134.8	76.0	124.9
June	115.4	111.8	117.4	112.4	112.2	135.2	75.8	124.1
July	115.5	110.5	118.1	112.2	112.6	136.9	75.5	123.1
Aug	115.0	109.3	117.9	111.4	112.9	137.2	72.0	121.9
Sept	114.5	108.0	117.9	111.9	113.0	138.0	73.9	121.4
Oct	114.5	107.8	117.9	112.4	113.3	138.2	73.7	121.4
Nov	115.5	109.0	118.9	112.1	113.5	138.0	72.8	121.0
Dec	116.6	111.5	119.3	112.3	113.6	139.5	73.7	121.0
1990: Jan	118.3	114.9	120.2	114.1	114.6	138.9	79.8	121.2
Feb	118.4	115.7	120.0	113.6	114.6	141.7	77.0	121.7
Mar	118.9	115.3	120.9	113.2	114.7	141.6	74.6	121.8
Apr	118.5	113.3	121.2	113.2	114.9	142.9	73.4	121.9
May	120.1	113.7	123.5	113.5	114.8	143.7	74.1	122.3
June	119.6	113.6	122.8	113.2	115.0	143.0	72.8	122.2
July	120.0	113.8	123.2	113.4	115.1	142.8	72.7	122.4
Aug. [2]	119.1	111.4	123.0	115.9	115.1	142.2	82.4	122.5
Sept	117.9	109.0	122.4	118.3	115.0	141.6	91.0	124.8
Oct	118.1	109.8	122.2	121.3	115.0	140.8	100.7	126.6
Nov	117.4	108.3	121.9	120.6	115.1	140.5	97.4	127.9
Dec	117.0	107.6	121.7	118.9	115.1	140.6	90.2	127.8

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[1] Prices for some items in this grouping are lagged and refer to 1 month earlier than the index month.

See next page for continuation of table.

TABLE B–65.—*Producer price indexes for major commodity groups, 1947–90*—Continued

[1962=100].

Year or month	Industrial commodities—Continued									
	Rubber and plastic products	Lumber and wood products	Pulp, paper, and allied products	Metals and metal products	Machinery and equipment	Furniture and household durables	Non-metallic mineral products	Transportation equipment		Miscellaneous products
								Total	Motor vehicles and equipment	
1947	29.2	25.8	25.1	18.2	19.3	37.2	20.7	....	25.5	26.6
1948	30.2	29.5	26.2	20.7	20.9	39.4	22.4	....	28.2	27.7
1949	29.2	27.3	25.1	20.9	21.9	40.1	23.0	....	30.1	28.2
1950	35.6	31.4	25.7	22.0	22.6	40.9	23.5	....	30.0	28.6
1951	43.7	34.1	30.5	24.5	25.3	44.4	25.0	....	31.6	30.3
1952	39.6	33.2	29.7	24.5	25.3	43.5	25.0	....	33.4	30.2
1953	36.9	33.1	29.6	25.3	25.9	44.4	26.0	....	33.3	31.0
1954	37.5	32.5	29.6	25.5	26.3	44.9	26.6	....	33.4	31.3
1955	42.4	34.1	30.4	27.2	27.2	45.1	27.3	....	34.3	31.3
1956	43.0	34.6	32.4	29.6	29.3	46.3	28.5	....	36.3	31.7
1957	42.8	32.8	33.0	30.2	31.4	47.5	29.6	....	37.9	32.6
1958	42.8	32.5	33.4	30.0	32.1	47.9	29.9	....	39.0	33.3
1959	42.6	34.7	33.7	30.6	32.8	48.0	30.3	....	39.9	33.4
1960	42.7	33.5	34.0	30.6	33.0	47.8	30.4	....	39.3	33.6
1961	41.1	32.0	33.0	30.5	33.0	47.5	30.5	....	39.2	33.7
1962	39.9	32.2	33.4	30.2	33.0	47.2	30.5	....	39.2	33.9
1963	40.1	32.8	33.1	30.3	33.1	46.9	30.3	....	38.9	34.2
1964	39.6	33.5	33.0	31.1	33.3	47.1	30.4	....	39.1	34.4
1965	39.7	33.7	33.3	32.0	33.7	46.8	30.4	....	39.2	34.7
1966	40.5	35.2	34.2	32.8	34.7	47.4	30.7	....	39.2	35.3
1967	41.4	35.1	34.6	33.2	35.9	48.3	31.2	....	39.8	36.2
1968	42.8	39.8	35.0	34.0	37.0	49.7	32.4	....	40.9	37.0
1969	43.6	44.0	36.0	36.0	38.2	50.7	33.6	40.4	41.7	38.1
1970	44.9	39.9	37.5	38.7	40.0	51.9	35.3	41.9	43.3	39.8
1971	45.2	44.7	38.1	39.4	41.4	53.1	38.2	44.2	45.7	40.8
1972	45.3	50.7	39.3	40.9	42.3	53.8	39.4	45.5	47.0	41.5
1973	46.6	62.2	42.3	44.0	43.7	55.7	40.7	46.1	47.4	43.3
1974	56.4	64.5	52.5	57.0	50.0	61.8	47.8	50.3	51.4	48.1
1975	62.2	62.1	59.0	61.5	57.9	67.5	54.4	56.7	57.6	53.4
1976	66.0	72.2	62.1	65.0	61.3	70.3	58.2	60.5	61.2	55.6
1977	69.4	83.0	64.6	69.3	65.2	73.2	62.6	64.6	65.2	59.4
1978	72.4	96.9	67.7	75.3	70.3	77.5	69.6	69.5	70.0	66.7
1979	80.5	105.5	75.9	86.0	76.7	82.8	77.6	75.3	75.8	75.5
1980	90.1	101.5	86.3	95.0	86.0	90.7	88.4	82.9	83.1	93.6
1981	96.4	102.8	94.8	99.6	94.4	95.9	96.7	94.3	94.6	96.1
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	100.8	107.9	103.3	101.8	102.7	103.4	101.6	102.8	102.2	104.8
1984	102.3	108.0	110.3	104.8	105.1	105.7	105.4	105.2	104.1	107.0
1985	101.9	106.6	113.3	104.4	107.2	107.1	108.6	107.9	106.4	109.4
1986	101.9	107.2	116.1	103.2	108.8	108.2	110.0	110.5	109.1	111.6
1987	103.0	112.8	121.8	107.1	110.4	109.9	110.0	112.5	111.7	114.9
1988	109.3	118.9	130.4	118.7	113.2	113.1	111.2	114.3	113.1	120.2
1989	112.6	126.7	137.8	124.1	117.4	116.9	112.6	117.7	116.2	126.5
1990 [a]	113.6	129.7	141.3	123.0	120.7	119.1	114.7	121.5	118.2	134.2
1989: Jan	111.9	120.1	135.1	125.3	115.6	115.0	111.8	116.8	116.2	124.0
Feb	112.2	122.0	136.3	125.1	116.0	115.3	111.8	117.1	116.5	124.2
Mar	112.7	123.2	136.9	125.6	116.3	115.7	112.0	116.8	115.5	124.5
Apr	113.0	125.2	137.4	125.6	116.5	116.2	112.6	116.4	114.8	124.6
May	113.0	126.5	137.8	125.2	116.9	116.5	112.7	117.2	115.6	125.2
June	112.8	127.4	137.9	124.0	117.3	117.0	112.8	117.6	115.9	126.7
July	112.8	128.9	138.0	123.0	117.8	117.5	112.8	116.9	114.5	127.2
Aug	112.6	129.0	138.4	123.0	118.0	117.9	112.8	117.1	114.5	127.4
Sept	112.7	129.0	138.6	123.7	118.2	117.9	112.9	116.6	113.8	127.6
Oct	112.5	130.9	139.1	123.9	118.5	117.7	113.0	120.0	119.6	128.2
Nov	112.5	130.0	139.3	122.8	118.7	117.8	113.1	120.0	118.8	128.4
Dec	112.9	128.5	139.2	121.7	118.9	117.9	113.2	119.8	118.6	130.0
1990: Jan	113.2	129.0	140.3	121.7	119.6	118.4	113.8	119.7	117.2	131.2
Feb	112.9	129.7	140.5	120.9	119.7	118.7	113.9	120.2	117.3	131.9
Mar	113.3	130.5	140.7	122.0	120.0	118.7	114.2	120.3	117.0	132.0
Apr	113.3	132.4	140.9	122.9	120.2	119.0	114.3	120.5	116.9	132.3
May	113.5	132.0	141.1	123.1	120.4	119.0	114.5	120.4	116.6	133.2
June	113.2	130.7	141.0	122.6	120.5	119.2	114.6	121.0	117.6	134.4
July	113.1	131.3	141.1	122.9	120.8	119.1	114.6	121.2	117.8	134.6
Aug. [a]	113.2	130.2	141.1	124.2	120.9	119.2	114.7	121.1	117.2	134.9
Sept	113.5	129.5	141.5	124.6	121.0	119.4	115.0	120.9	116.6	135.1
Oct	114.1	127.8	142.0	124.7	121.3	119.6	115.3	124.0	121.4	135.9
Nov	114.7	126.7	142.4	123.5	121.6	119.6	115.9	124.2	121.5	137.0
Dec	115.2	126.7	142.4	122.3	121.8	119.7	115.9	124.4	121.4	138.4

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[a] Data have been revised through August 1990 to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

Source: Department of Labor, Bureau of Labor Statistics.

Table B–66.—*Changes in producer price indexes for finished goods, 1955–90*

[Percent change]

Year or month	Total finished goods		Finished consumer foods		Finished goods excluding consumer foods						Finished energy goods		Finished goods excluding foods and energy	
					Total		Consumer goods		Capital equipment					
	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year
1955	1.0	0.3	−3.0	−2.3	....	....	1.6	0.6	5.6	2.6	....	....	....	....
1956	4.2	2.6	3.7	−.3	....	....	2.5	2.6	8.1	7.7	....	....	....	....
1957	3.4	3.8	5.1	3.3	....	....	1.5	2.5	4.6	6.1	....	....	....	....
1958	.3	2.2	.6	6.1	....	....	.3	0	1.2	2.6	....	....	....	....
1959	−.3	−.3	−3.7	−4.7	....	....	.9	1.2	.9	1.9	....	....	....	....
1960	1.8	.9	5.3	2.0	....	....	.3	.6	.3	.3	....	....	....	....
1961	−.6	0	−1.9	−.3	....	....	−.3	−.3	0	.3	....	....	....	....
1962	.3	.3	.6	.8	....	....	0	0	.3	.3	....	....	....	....
1963	−.3	−.3	−1.4	−1.1	....	....	0	0	.6	.3	....	....	....	....
1964	.6	.3	.6	.3	....	....	.3	−.3	.9	.9	....	....	....	....
1965	3.3	1.8	9.1	4.0	....	....	.9	.9	1.5	1.2	....	....	....	....
1966	2.0	3.2	1.3	6.5	....	....	1.8	1.5	3.8	2.4	....	....	....	....
1967	1.7	1.1	−.3	−1.8	....	....	2.0	1.8	3.1	3.5	....	....	....	....
1968	3.1	2.8	4.6	3.9	2.5	2.6	2.0	2.3	3.0	3.4	....	....	....	....
1969	4.9	3.8	8.1	6.0	3.3	2.8	2.8	2.3	4.8	3.5	....	....	....	....
1970	2.1	3.4	−2.3	3.3	4.3	3.5	3.8	3.0	4.8	4.7	....	....	....	....
1971	3.3	3.1	5.8	1.6	2.0	3.7	2.1	3.5	2.4	4.0	....	....	....	....
1972	3.9	3.2	7.9	5.4	2.3	2.0	2.1	1.8	2.1	2.6	....	....	....	....
1973	11.7	9.1	22.7	20.5	6.6	4.0	7.5	4.6	5.1	3.3	....	....	....	....
1974	18.3	15.4	12.8	14.0	21.1	16.2	20.3	17.0	22.7	14.3	....	....	17.7	11.4
1975	6.6	10.6	5.6	8.4	7.2	12.1	6.8	10.4	8.1	15.2	16.3	17.2	6.0	11.4
1976	3.8	4.5	−2.5	−.3	6.2	6.2	6.0	6.2	6.5	6.7	11.6	11.7	5.7	5.7
1977	6.7	6.4	6.9	5.3	6.8	7.1	6.7	7.3	7.2	6.4	12.0	15.7	6.2	6.0
1978	9.3	7.9	11.7	9.0	8.3	7.2	8.5	7.1	8.0	7.9	8.5	6.5	8.4	7.5
1979	12.8	11.2	7.4	9.3	14.8	11.8	17.6	13.3	8.8	8.7	58.1	35.0	9.4	8.9
1980	11.8	13.4	7.5	5.8	13.4	16.2	14.1	18.5	11.4	10.7	27.9	49.2	10.8	11.2
1981	7.1	9.2	1.5	5.8	8.7	10.3	8.6	10.3	9.2	10.3	14.1	19.1	7.7	8.6
1982	3.6	4.1	2.0	2.2	4.2	4.6	4.2	4.1	3.9	5.7	−.1	−1.5	4.9	5.7
1983	.6	1.6	2.3	1.0	0	1.8	−.9	1.2	2.0	2.8	−9.2	−4.8	1.9	3.0
1984	1.7	2.1	3.5	4.4	1.1	1.4	.8	1.0	1.8	2.3	−4.2	−4.2	2.0	2.4
1985	1.8	1.0	.6	−.8	2.2	1.4	2.1	1.1	2.7	2.2	−.2	−3.9	2.7	2.5
1986	−2.3	−1.4	2.8	2.6	−4.0	−2.6	−6.6	−4.6	2.1	2.0	−38.1	−28.1	2.7	2.3
1987	2.2	2.1	−.2	2.1	3.2	2.1	4.1	2.2	1.3	1.8	11.2	−1.9	2.1	2.4
1988	4.0	2.5	5.7	2.8	3.2	2.4	3.1	2.4	3.6	2.3	−3.6	−3.2	4.3	3.3
1989	4.9	5.2	5.2	5.4	4.8	5.0	5.3	5.6	3.8	3.9	9.5	9.9	4.2	4.4
1990 [2]	5.6	4.9	2.5	4.8	6.7	5.0	8.5	5.8	3.4	3.5	29.8	14.0	3.5	3.7
	Percent change from preceding month													
	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted
1989: Jan	1.0	1.1	1.4	1.3	0.8	0.9	1.0	1.1	0.6	0.5	2.7	3.9	0.6	0.5
Feb	.5	.6	.4	.8	.6	.7	.8	.8	.3	.4	1.6	2.1	.5	.6
Mar	.4	.4	.9	.6	.1	.4	.2	.4	0	.2	.8	1.3	0	.2
Apr	.8	.6	−.5	−.5	1.3	.9	1.9	1.6	.1	−.1	9.8	7.5	.1	.1
May	1.1	.7	1.2	.5	1.1	.9	1.4	.9	.6	.6	5.0	2.5	.5	.6
June	.1	.1	−.4	−.6	.2	.3	.1	.2	.4	.6	−2.2	−2.3	.6	.7
July	−.2	−.4	.3	.2	−.4	−.5	−.5	−.9	−.1	.1	−2.6	−3.3	0	−.2
Aug	−.6	−.3	−.3	.3	−.6	−.5	−1.2	−.9	.3	.3	−7.0	−6.9	.2	.5
Sept	.2	.7	−.2	−.3	.3	1.2	.6	1.4	−.1	.7	3.6	6.6	−.1	.4
Oct	1.1	.5	.8	1.4	1.2	.3	1.1	.4	1.3	−.1	−.2	.2	1.3	.2
Nov	0	.1	.5	.8	−.2	−.2	−.4	−.4	.2	.3	−1.8	−2.9	.1	.2
Dec	.4	.6	.8	.7	.4	.5	.5	.6	0	.2	.3	1.4	.3	.4
1990: Jan	1.9	1.9	2.3	2.3	1.8	1.9	2.5	2.7	.3	.2	12.2	13.7	.3	.2
Feb	−.2	0	.6	.7	−.3	−.3	−.7	−.6	.3	.4	−4.8	−4.5	.3	.3
Mar	−.2	−.2	−.2	−.5	−.3	0	−.5	−.3	.2	.4	−3.2	−2.7	.2	.4
Apr	0	−.2	−1.0	−.9	.3	0	.4	−.1	.2	.1	1.5	−.7	.2	.1
May	.4	.1	1.1	.3	.3	.1	.4	.1	0	.1	.7	−1.5	.2	.3
June	.1	.2	−.2	−.4	.2	.3	.2	.3	.2	.4	−1.3	−1.6	.4	.6
July	.3	.1	.6	.3	.3	.1	.3	−.1	.2	.3	.7	0	.2	0
Aug [2]	.9	1.1	0	.6	1.2	1.3	1.7	1.8	.2	.3	9.0	8.7	0	.2
Sept	.8	1.6	−.6	−.8	1.4	2.3	2.3	3.3	−.2	.6	10.5	14.1	.1	.6
Oct	1.7	1.1	.4	.9	2.0	1.2	2.5	1.8	1.3	−.2	7.4	8.0	1.0	0
Nov	.5	.5	.4	.8	.5	.4	.6	.5	.2	.2	1.5	.1	.3	.5
Dec	−.8	−.6	−.8	−.9	−.8	−.5	−1.2	−1.0	.2	.4	−5.9	−4.8	.2	.3

[1] Changes from December to December are based on unadjusted indexes.

[2] Data have been revised through August 1990 to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–67.—*Money stock, liquid assets, and debt measures, 1959–90*

[Averages of daily figures; billions of dollars, seasonally adjusted]

Year and month	M1	M2	M3	L	Debt [1]	Percent change from year or 6 months earlier [2]			
	Sum of currency, demand deposits, travelers checks, and other checkable deposits (OCDs)	M1 plus overnight RPs and Eurodollars, MMMF balances (general purpose and broker/dealer), MMDAs, and savings and small time deposits	M2 plus large time deposits, term RPs, term Eurodollars, and institution-only MMMF balances	M3 plus other liquid assets	Debt of domestic nonfinancial sectors (monthly average)	M1	M2	M3	Debt
December:									
1959	140.0	297.8	299.8	388.7	704.7	....	....	....	7.5
1960	140.7	312.4	315.3	403.7	739.5	0.5	4.9	5.2	4.9
1961	145.2	335.5	341.1	430.8	781.8	3.2	7.4	8.2	5.7
1962	147.9	362.7	371.5	466.1	833.9	1.9	8.1	8.9	6.7
1963	153.4	393.3	406.1	503.8	888.9	3.7	8.4	9.3	6.6
1964	160.4	424.8	442.5	540.4	952.0	4.6	8.0	9.0	7.1
1965	167.9	459.4	482.3	584.5	1,020.3	4.7	8.1	9.0	7.2
1966	172.1	480.0	505.1	614.8	1,087.8	2.5	4.5	4.7	6.6
1967	183.3	524.4	557.1	666.6	1,163.3	6.5	9.2	10.3	6.9
1968	197.5	566.4	606.3	729.0	1,256.7	7.7	8.0	8.8	8.0
1969	204.0	589.6	615.1	763.6	1,347.0	3.3	4.1	1.5	7.2
1970	214.5	628.1	677.4	816.3	1,437.1	5.1	6.5	10.1	6.7
1971	228.4	712.7	776.2	903.0	1,568.6	6.5	13.5	14.6	9.2
1972	249.3	805.2	886.0	1,023.0	1,723.8	9.2	13.0	14.1	9.9
1973	262.9	861.0	985.0	1,142.6	1,912.1	5.5	6.9	11.2	10.9
1974	274.4	908.6	1,070.4	1,250.3	2,083.6	4.4	5.5	8.7	9.0
1975	287.6	1,023.3	1,172.3	1,367.0	2,264.3	4.8	12.6	9.5	8.7
1976	306.4	1,163.7	1,311.8	1,516.6	2,503.0	6.5	13.7	11.9	10.5
1977	331.3	1,286.7	1,472.6	1,705.3	2,815.8	8.1	10.6	12.3	12.5
1978	358.5	1,389.0	1,646.6	1,910.7	3,188.5	8.2	8.0	11.8	13.2
1979	382.9	1,497.1	1,803.2	2,116.2	3,568.5	6.8	7.8	9.5	11.9
1980	408.9	1,629.9	1,987.5	2,324.2	3,904.1	6.8	8.9	10.2	9.4
1981	436.5	1,793.5	2,234.2	2,596.8	4,292.1	6.7	10.0	12.4	9.9
1982	474.5	1,953.1	2,441.9	2,851.6	4,685.9	8.7	8.9	9.3	9.2
1983	521.2	2,186.5	2,693.4	3,154.7	5,212.6	9.8	12.0	10.3	11.2
1984	552.1	2,371.6	2,982.8	3,524.1	5,961.9	5.9	[illegible]	10.7	14.4
1985	620.1	2,570.6	3,202.1	3,829.5	6,773.5	12.3	8.4	7.4	13.6
1986	724.7	2,814.2	3,494.5	4,135.5	7,636.2	16.9	9.5	9.1	12.7
1987	750.4	2,913.2	3,678.7	4,338.7	8,345.1	3.5	3.5	5.3	9.3
1988	787.5	3,072.4	3,918.3	4,676.1	9,107.6	4.9	5.5	6.5	9.1
1989	794.8	3,221.6	4,044.3	4,881.2	9,790.4	.9	4.9	3.2	7.5
1990	825.5	3,323.3	4,094.0	....	....	3.9	3.2	1.2	....
1989: Jan	785.8	3,073.4	3,925.9	4,683.3	9,150.3	.6	2.7	4.1	8.3
Feb	786.7	3,078.0	3,936.7	4,702.0	9,209.8	.6	2.7	4.1	8.0
Mar	785.5	3,086.9	3,956.5	4,735.9	9,279.9	.2	3.0	4.6	8.0
Apr	782.1	3,089.4	3,965.0	4,762.0	9,342.9	−.8	2.7	4.2	8.1
May	776.2	3,085.3	3,965.6	4,761.9	9,403.6	−2.5	1.4	3.2	7.8
June	773.7	3,101.6	3,984.9	4,784.4	9,457.9	−3.5	1.9	3.4	7.7
July	779.1	3,127.0	4,007.6	4,810.5	9,506.9	−1.7	3.5	4.2	7.8
Aug	780.4	3,146.9	4,013.0	4,825.2	9,570.7	−1.6	4.5	3.9	7.8
Sept	782.9	3,163.6	4,013.5	4,831.8	9,629.1	−.7	5.0	2.9	7.5
Oct	788.1	3,181.9	4,018.1	4,841.7	9,689.0	1.5	6.0	2.7	7.4
Nov	789.4	3,201.2	4,031.0	4,858.1	9,751.7	3.4	7.5	3.3	7.4
Dec	794.8	3,221.6	4,044.3	4,881.2	9,790.4	5.5	7.7	3.0	7.0
1990: Jan	794.8	3,231.0	4,048.5	4,882.5	9,831.3	4.0	6.7	2.0	6.8
Feb	801.4	3,255.7	4,064.3	4,890.4	9,889.9	5.4	6.9	2.6	6.7
Mar	804.8	3,271.0	4,069.0	4,906.6	9,959.1	5.6	6.8	2.8	6.9
Apr	807.3	3,278.1	4,073.6	4,916.8	10,015.9	4.9	6.0	2.8	6.7
May	805.4	3,272.6	4,066.6	4,888.0	10,059.9	4.1	4.5	1.8	6.3
June	809.4	3,280.8	4,071.3	4.907.1	10,117.8	3.7	3.7	1.3	6.7
July	809.0	3,285.4	4,075.2	4,916.0	10,193.5	3.6	3.4	1.3	7.2
Aug	815.9	3,302.9	4,091.3	4,927.3	10,256.6	3.6	2.9	1.3	7.4
Sept	822.2	3,317.2	4,094.1	4,952.4	10,313.6	4.3	2.8	1.2	7.1
Oct	820.1	3,318.9	4,092.6	4,948.0	10,355.3	3.2	2.5	.9	6.8
Nov	822.6	3,317.7	4,092.0	4,956.8	10,414.5	4.3	2.8	1.2	7.0
Dec	825.5	3.323.3	4,094.0	....	....	4.0	2.6	1.1	....

[1] Consists of outstanding credit market debt of the U.S. Government, State and local governments, and private nonfinancial sectors; data from flow of funds accounts.

[2] Annual changes are from December to December; monthly changes are from 6 months earlier at a simple annual rate.

Note.—See *Federal Reserve Bulletin*, May 1990, for revisions made to the series in February 1990. See Table B–68 for components.

Source: Board of Governors of the Federal Reserve System.

TABLE B–68.—*Components of money stock measures and liquid assets, 1959–90*

[Averages of daily figures; billions of dollars, seasonally adjusted, except as noted]

Year and month	Currency	Travelers checks	Demand deposits	Other checkable deposits (OCDs)	Overnight repurchase agreements (RPs) net, plus overnight Eurodollars NSA	Money market mutual fund (MMMF) balances		Money market deposit accounts (MMDAs)	Savings deposits
						General purpose and broker/dealer[1]	Institution only[1]		
December:									
1959	28.8	0.4	110.8	0.0	0.0	0.0	0.0	0.0	146.4
1960	28.7	.4	111.6	.0	.0	.0	.0	.0	159.1
1961	29.3	.4	115.5	.0	.0	.0	.0	.0	175.5
1962	30.3	.4	117.1	.0	.0	.0	.0	.0	194.8
1963	32.2	.5	120.6	.1	.0	.0	.0	.0	214.4
1964	33.9	.5	125.8	.1	.0	.0	.0	.0	235.2
1965	36.0	.6	131.3	.1	.0	.0	.0	.0	256.9
1966	38.0	.6	133.4	.1	.0	.0	.0	.0	253.1
1967	40.0	.7	142.5	.1	.0	.0	.0	.0	263.7
1968	43.0	.8	153.6	.1	.0	.0	.0	.0	268.9
1969	45.7	.8	157.3	.2	2.2	.0	.0	.0	263.7
1970	48.6	1.0	164.7	.1	1.3	.0	.0	.0	261.0
1971	52.0	1.1	175.1	.2	2.3	.0	.0	.0	292.2
1972	56.2	1.3	191.6	.2	2.8	.0	.0	.0	321.4
1973	60.8	1.5	200.3	.3	5.3	.0	.0	.0	326.7
1974	67.0	1.8	205.1	.4	5.7	1.7	.2	.0	338.5
1975	72.8	2.3	211.6	.9	5.9	2.7	.4	.0	388.8
1976	79.5	2.8	221.6	2.7	10.7	2.4	.6	.0	453.0
1977	87.4	3.1	236.7	4.2	14.9	2.4	.9	.0	492.1
1978	96.0	3.5	250.5	8.4	20.7	6.4	3.1	.0	481.8
1979	104.8	3.8	257.5	16.8	21.7	33.4	9.5	.0	423.7
1980	115.3	4.2	261.4	28.0	28.8	61.6	15.2	.0	400.1
1981	122.6	4.4	231.4	78.2	36.6	150.6	38.0	.0	343.8
1982	132.5	4.3	234.1	103.6	39.9	185.2	51.1	43.2	356.7
1983	146.2	4.9	238.5	131.6	55.6	138.8	42.8	379.2	305.4
1984	156.0	5.2	243.9	146.9	60.6	168.2	62.1	416.8	285.1
1985	167.8	5.9	266.8	179.6	73.5	177.2	63.9	513.0	301.2
1986	180.6	6.5	302.1	235.5	82.3	208.7	83.8	571.0	370.1
1987	196.7	7.0	287.0	259.7	83.2	222.0	89.0	523.8	414.9
1988	211.8	7.5	287.0	281.3	83.3	240.9	87.1	500.3	427.8
1989	221.9	7.4	279.7	285.7	77.4	312.4	102.3	483.7	409.0
1990	245.9	8.4	277.5	293.8	73.7	344.5	126.5	505.6	412.9
1989: Jan	213.2	7.6	284.5	280.6	86.5	243.9	87.1	492.6	424.2
Feb	214.1	7.5	284.9	280.2	83.3	247.2	86.9	485.6	421.0
Mar	215.3	7.3	283.9	279.1	82.0	253.4	86.3	479.9	417.9
Apr	215.7	7.3	281.3	277.9	78.5	257.8	88.3	473.2	412.0
May	216.6	7.3	279.6	272.8	77.8	261.2	92.1	463.1	405.4
June	217.2	7.2	276.3	273.0	79.6	268.3	96.3	460.9	403.4
July	217.8	7.2	279.6	274.5	81.0	277.7	99.0	463.9	403.3
Aug	218.6	7.2	278.5	276.0	78.4	287.8	101.4	468.2	404.0
Sept	219.3	7.2	278.1	278.4	75.1	295.9	101.6	471.9	405.5
Oct	220.0	7.3	280.0	280.8	75.7	302.7	101.1	475.3	406.1
Nov	220.4	7.4	278.8	282.8	75.4	309.0	101.1	480.8	407.9
Dec	221.9	7.4	279.7	285.7	77.4	312.4	102.3	483.7	409.0
1990: Jan	224.6	7.5	277.3	285.4	81.6	318.6	103.2	485.0	410.2
Feb	226.6	7.6	280.2	287.0	82.4	325.3	103.7	489.4	413.6
Mar	228.4	7.6	279.3	289.5	81.9	325.9	105.4	494.9	414.6
Apr	230.1	7.6	277.8	291.8	79.3	325.8	106.8	498.8	415.8
May	231.6	7.7	274.5	291.5	83.2	320.5	107.3	500.0	415.0
June	233.4	7.7	274.5	293.8	82.3	322.1	107.3	501.2	415.8
July	235.4	7.7	274.7	291.2	84.1	325.3	108.9	502.5	416.4
Aug	238.4	8.0	277.9	291.6	82.7	333.3	114.0	505.6	416.3
Sept	241.6	8.3	279.7	292.7	81.5	337.9	116.1	507.2	415.9
Oct	244.0	8.4	276.8	290.9	83.7	340.6	119.8	506.5	414.7
Nov	244.7	8.4	277.2	292.3	77.6	340.3	120.1	507.0	413.8
Dec	245.9	8.4	277.5	293.8	73.7	344.5	126.5	505.6	412.9

[1] Data for 1974 through 1982 are not seasonally adjusted.

See next page for continuation of table.

TABLE B-68.—*Components of money stock measures and liquid assets, 1959-90*—Continued

[Averages of daily figures; billions of dollars, seasonally adjusted, except as noted]

Year and month	Small denomination time deposits [2]	Large denomination time deposits [2]	Term repurchase agreements (RPs) NSA	Term Eurodollars NSA	Savings bonds	Short-term Treasury securities	Bankers acceptances	Commercial paper
December:								
1959	11.4	1.2	0.0	0.7	46.1	38.6	0.6	3.6
1960	12.5	2.0	.0	.8	45.7	36.7	.9	5.1
1961	14.8	3.9	.0	1.5	46.5	37.0	1.1	5.2
1962	20.1	7.0	.0	1.6	46.9	39.8	1.1	6.8
1963	25.5	10.8	.0	1.9	48.1	40.7	1.2	7.7
1964	29.2	15.2	.0	2.4	49.0	38.5	1.3	9.1
1965	34.5	21.2	.0	1.8	49.6	40.7	1.6	10.2
1966	55.0	23.1	.0	2.2	50.2	43.2	1.8	14.4
1967	77.8	30.9	.0	2.2	51.2	38.7	1.8	17.8
1968	100.5	37.4	.0	2.9	51.8	46.1	2.3	22.5
1969	120.4	20.4	2.7	2.7	51.7	59.5	3.3	34.0
1970	151.1	45.3	1.6	2.2	52.0	48.8	3.5	34.5
1971	189.7	57.7	2.7	2.7	54.3	36.0	3.8	32.7
1972	231.6	73.3	3.5	3.6	57.6	40.7	3.5	35.2
1973	265.8	111.1	6.7	5.5	60.4	49.3	5.0	42.8
1974	287.9	144.8	7.8	8.1	63.3	52.8	12.6	51.2
1975	337.9	129.7	8.1	9.8	67.2	68.4	10.7	48.5
1976	390.7	118.1	13.9	14.8	71.8	69.8	10.8	52.5
1977	445.4	145.2	18.9	20.2	76.4	78.1	14.1	64.1
1978	521.0	195.7	26.2	31.8	80.3	81.1	22.0	80.7
1979	634.3	223.2	29.1	44.7	79.6	107.8	27.2	98.3
1980	728.6	260.4	33.5	50.3	72.3	133.5	32.1	98.8
1981	823.2	303.0	35.3	67.5	67.8	149.4	40.0	105.3
1982	851.0	327.2	33.4	81.7	68.0	183.6	44.5	113.7
1983	784.0	327.6	49.9	91.5	71.1	211.9	45.0	133.2
1984	886.8	417.4	57.6	82.9	74.2	260.9	45.5	160.8
1985	884.0	437.0	62.4	76.5	79.5	298.3	42.1	207.5
1986	856.2	439.8	80.5	83.8	91.8	280.8	37.2	231.1
1987	917.8	488.8	106.1	91.0	100.6	254.2	44.8	260.4
1988	1,031.0	541.1	121.7	106.0	109.3	272.0	40.6	335.6
1989	1,142.3	558.3	96.9	81.1	117.5	330.3	41.2	347.9
1990	1,158.8	499.8	86.2	72.7	....	....	....	....
1989: Jan	1,042.7	546.7	123.0	100.6	109.8	271.4	40.6	335.7
Feb	1,054.2	553.3	126.7	100.1	110.7	270.5	40.6	343.6
Mar	1,066.4	560.1	128.9	105.7	111.5	278.3	41.4	348.3
Apr	1,084.1	568.3	126.3	100.2	112.2	285.1	41.5	358.2
May	1,103.0	573.1	127.5	97.2	112.8	293.5	41.2	348.8
June	1,114.0	574.9	128.4	93.4	113.6	295.2	41.2	349.4
July	1,122.4	574.7	124.1	91.8	114.3	297.2	41.9	349.5
Aug	1,130.0	570.5	117.6	89.8	115.0	300.2	42.6	354.3
Sept	1,132.6	565.6	113.9	85.5	115.7	311.3	41.0	350.3
Oct	1,135.9	562.7	109.6	80.1	116.2	317.4	40.0	350.0
Nov	1,138.5	561.0	108.9	79.3	116.8	318.6	40.5	351.3
Dec	1,142.3	558.3	96.9	81.1	117.5	330.3	41.2	347.9
1990: Jan	1,143.0	554.5	93.6	73.9	117.7	332.3	40.7	343.3
Feb	1,142.6	550.1	96.9	68,4	118.2	324.9	38.3	344.7
Mar	1,146.4	544.1	95.2	66.6	119.1	338.9	37.0	342.7
Apr	1,148.3	538.3	94.8	65.5	119.9	330.1	35.8	357.5
May	1,150.4	535.4	95.8	67.2	120.7	315.8	35.3	349.6
June	1,149.0	532.9	98.7	64.4	121.5	330.3	34.6	349.4
July	1,149.7	530.6	96.9	65.2	122.4	336.8	32.9	348.7
Aug	1,151.5	524.4	98.3	68.4	123.2	335.4	32.3	345.1
Sept	1,152.9	517.2	94.5	69.5	123.8	344.5	31.8	358.2
Oct	1,155.6	511.1	91.3	71.1	124.5	342.0	32.4	356.5
Nov	1,156.0	506.6	91.4	72.6	125.2	347.9	34.0	357.7
Dec	1,158.8	499.8	86.2	72.7	....	....	....	....

[2] Small denomination and large denomination deposits are those issued in amounts of less than $100,000 and more than $100,000, respectively.

Note.—NSA indicates data are not seasonally adjusted.

See also Table B-67.

Source: Board of Governors of the Federal Reserve System.

TABLE B-69.—*Aggregate reserves of depository institutions and monetary base, 1959–90*

[Averages of daily figures [1]; millions of dollars; seasonally adjusted, except as noted]

Year and month	Adjusted for changes in reserve requirements [2]					Borrowings of depository institutions from the Federal Reserve, NSA		
	Reserves of depository institutions				Monetary base	Total	Seasonal	Extended credit
	Total	Nonborrowed	Nonborrowed plus extended credit	Required				
December:								
1959	14,668	13,727	13,727	14,162	44,380	941	......	......
1960	14,833	14,759	14,759	14,089	44,330	74	......	......
1961	15,308	15,175	15,175	14,724	45,400	133	......	......
1962	15,595	15,334	15,334	15,023	46,665	260	......	......
1963	15,925	15,592	15,592	15,435	48,943	332	......	......
1964	16,449	16,185	16,185	16,043	51,335	264	......	......
1965	17,039	16,596	16,596	16,616	54,052	444	......	......
1966	17,043	16,511	16,511	16,704	56,135	532	......	......
1967	18,553	18,325	18,325	18,178	59,651	228	......	......
1968	19,506	18,761	18,761	19,081	63,781	746	......	......
1969	19,812	18,693	18,693	19,526	66,944	1,119	......	......
1970	20,785	20,453	20,453	20,536	71,032	332	......	......
1971	22,128	22,002	22,002	21,946	75,818	126	......	......
1972	24,357	23,307	23,307	24,073	82,524	1,050	......	......
1973	25,448	24,150	24,150	25,144	89,119	1,298	41	......
1974	26,783	26,055	26,202	26,524	96,409	727	32	147
1975	26,934	26,804	26,816	26,668	102,556	130	14	12
1976	27,522	27,469	27,249	27,249	110,160	53	13	......
1977	28,646	28,077	28,077	28,456	119,356	569	55	......
1978	30,033	29,165	29,165	29,801	130,031	868	135	......
1979	31,406	29,934	29,934	30,965	141,068	1,473	82	......
1980	33,401	31,711	31,714	32,887	152,525	1,690	116	3
1981	35,315	34,679	34,827	34,996	160,936	636	54	148
1982	37,388	36,754	36,940	36,888	172,947	634	33	186
1983	39,184	38,410	38,412	38,623	188,275	774	96	2
1984	42,235	39,049	41,653	41,380	201,673	3,186	113	2,604
1985	48,373	47,055	47,554	47,336	219,350	1,318	56	499
1986	58,023	57,197	57,499	56,653	241,427	827	38	303
1987	58,593	57,815	58,298	57,546	258,055	777	93	483
1988	60,593	58,877	60,121	59,545	275,238	1,716	130	1,244
1989	60,033	59,767	59,787	59,110	284,946	265	84	20
1990	60,528	60,202	60,225	58,861	309,493	326	76	23
1989: Jan	60,363	58,701	59,747	59,214	276,563	1,662	76	1,046
Feb	60,367	58,880	59,930	59,229	277,300	1,487	97	1,050
Mar	59,929	58,117	59,451	59,023	278,177	1,813	139	1,334
Apr	59,374	57,084	58,791	58,575	278,198	2,289	213	1,707
May	58,831	57,111	58,308	57,796	278,526	1,720	345	1,197
June	58,597	57,107	58,024	57,692	279,020	1,490	431	917
July	58,867	58,173	58,279	57,901	279,957	694	497	106
Aug	58,906	58,231	58,272	58,021	280,756	675	490	41
Sept	59,289	58,596	58,618	58,351	281,806	693	452	22
Oct	59,640	59,085	59,106	58,620	282,786	555	330	21
Nov	59,646	59,297	59,318	58,701	283,222	349	134	21
Dec	60,033	59,767	59,787	59,110	284,946	265	84	20
1990: Jan	59,896	59,456	59,482	58,880	287,509	440	47	26
Feb	60,215	58,768	59,302	59,227	289,714	1,448	51	535
Mar	60,297	58,173	60,123	59,436	291,820	2,124	78	1,950
Apr	60,275	58,647	60,051	59,379	293,540	1,628	122	1,403
May	59,783	58,448	59,324	58,820	294,401	1,335	244	875
June	59,732	58,850	59,196	58,958	296,276	881	311	346
July	59,322	58,565	58,845	58,460	297,860	757	389	280
Aug	59,746	58,819	58,947	58,879	301,121	927	430	127
Sept	60,082	59,457	59,464	59,173	304,780	624	418	6
Oct	59,609	59,199	59,217	58,763	306,545	410	335	18
Nov	59,763	59,532	59,557	58,816	307,678	230	162	24
Dec	60,528	60,202	60,225	58,861	309,493	326	76	23

[1] Data are prorated averages of biweekly (maintenance period) averages of daily figures.

[2] Aggregate reserves incorporate adjustments for discontinuities associated with the implementation of the Monetary Control Act and other regulatory changes to reserve requirements. For details on aggregate reserves series see *Federal Reserve Bulletin*.

Note.—NSA indicates data are not seasonally adjusted.

Source: Board of Governors of the Federal Reserve System.

Table B–70.—*Commercial bank loans and securities, 1972–90*

[Monthly average; billions of dollars, seasonally adjusted [1]]

Year and month	Total loans and securities [2]	U.S. Government securities	Other securities	Loans and leases											
				Total [2]	Commercial and industrial	Real estate	Individual	Security	Nonbank financial institutions	Agricultural	State and political subdivisions	Foreign banks	Foreign official institutions	Lease financing receivables	Other
December:															
1972	572.5	89.0	93.4	390.1	137.1	98.1	86.3	15.6	21.7	14.3	....	3.9	1.6	1.4	10.1
1973	647.9	88.2	99.4	460.3	165.0	117.3	98.6	12.9	28.5	17.2	....	6.2	2.1	2.1	10.3
1974	713.9	86.3	107.5	520.0	196.7	130.1	102.4	12.7	34.5	18.3	....	8.3	2.2	3.2	11.6
1975	745.3	116.7	111.2	517.4	189.3	134.4	104.9	13.5	28.9	20.1	....	9.0	2.4	4.0	10.9
1976	804.9	136.3	113.5	555.1	190.9	148.8	116.3	17.7	26.4	23.2	....	11.7	2.8	5.1	12.2
1977	891.9	136.6	122.7	632.6	211.0	175.2	138.3	21.0	25.8	25.8	....	13.7	2.7	5.7	13.3
1978	1,014.4	137.6	129.2	747.5	246.2	210.5	164.7	19.7	26.2	28.2	....	21.5	4.9	7.4	18.2
1979	1,136.1	144.3	141.9	849.9	291.3	241.9	184.5	18.7	29.3	31.1	....	18.6	6.9	9.3	18.2
1980	1,238.9	170.6	154.4	913.9	325.7	262.6	179.2	17.9	29.3	31.6	0.0	23.8	11.5	10.9	21.5
1981	1,307.3	179.3	160.5	967.5	355.4	284.1	182.5	21.4	29.9	33.1	.0	18.1	7.2	12.7	23.1
1982	1,400.5	201.7	164.8	1,034.0	392.5	299.9	188.2	25.3	31.2	36.2	.0	14.6	5.9	13.3	26.9
1983	1,552.3	259.2	169.2	1,123.9	414.2	330.9	212.9	28.0	30.4	39.2	.0	13.4	9.4	13.7	31.8
1984	1,722.5	260.2	141.1	1,321.3	473.3	376.4	253.8	34.3	31.3	40.1	46.1	11.2	7.9	16.0	31.0
1985	1,910.1	270.6	179.3	1,460.3	500.5	426.0	294.7	43.0	32.4	36.1	56.8	9.8	6.0	19.0	35.9
1986	2,094.2	309.3	194.2	1,590.6	537.5	494.4	315.3	40.6	35.0	31.5	58.5	9.9	5.9	22.4	39.6
1987	2,239.5	334.4	193.8	1,711.2	567.9	587.4	328.4	35.1	31.9	29.4	52.6	7.9	5.3	24.6	40.7
1988	2,422.1	361.5	192.2	1,868.4	607.0	671.9	354.9	40.4	30.1	29.8	45.6	8.1	5.0	29.2	46.3
1989	2,588.8	396.1	180.8	2,011.9	641.6	761.1	375.8	38.8	33.0	30.7	40.1	8.9	3.6	31.8	46.5
1990 p	2,719.8	447.7	175.4	2,096.7	654.5	829.2	381.9	41.3	35.8	29.9	33.9	7.6	3.1	32.7	46.9
1989:															
Jan	2,418.6	361.9	190.7	1,866.0	606.0	676.5	356.6	40.4	30.2	30.1	43.3	7.8	5.0	29.4	40.9
Feb	2,445.4	362.7	190.1	1,892.5	617.3	684.0	357.9	45.0	30.6	30.0	43.4	8.0	4.9	29.7	41.6
Mar	2,462.2	368.7	189.6	1,903.8	619.2	690.3	359.5	43.7	30.2	29.7	43.4	7.5	4.9	30.0	45.6
Apr	2,468.6	370.3	188.4	1,909.8	621.6	698.9	361.7	39.9	29.6	29.7	43.3	7.3	4.9	30.0	42.9
May	2,482.4	372.7	188.0	1,921.7	626.7	705.7	364.0	38.4	29.3	29.9	43.1	8.0	4.7	30.2	41.8
June	2,495.2	373.7	187.5	1,934.0	627.0	712.6	364.5	40.5	30.6	30.0	42.8	7.9	4.4	30.2	43.5
July	2,513.7	374.3	186.6	1,952.8	631.6	721.0	366.0	40.0	31.3	30.3	42.5	8.0	4.3	30.7	47.0
Aug	2,531.7	376.2	184.2	1,971.4	636.1	730.0	367.9	38.9	31.4	30.4	42.2	8.4	4.2	31.1	50.6
Sept	2,546.2	379.3	183.6	1,983.3	638.2	739.1	370.8	39.5	31.7	30.4	41.7	8.1	4.2	31.4	48.0
Oct	2,570.5	390.9	181.4	1,998.2	642.0	746.7	372.4	40.7	33.2	30.5	41.3	9.1	3.8	31.9	46.6
Nov	2,585.8	396.0	179.9	2,009.9	645.0	754.0	374.4	40.9	33.9	30.5	40.8	8.3	3.7	31.9	46.4
Dec	2,588.8	396.1	180.8	2,011.9	641.6	761.1	375.8	38.8	33.0	30.7	40.1	8.9	3.6	31.8	46.5
1990:															
Jan	2,594.4	404.7	180.4	2,009.3	637.9	765.9	378.3	39.3	32.5	30.9	38.6	8.1	3.2	32.1	42.5
Feb	2,614.3	414.5	180.5	2,019.4	638.8	774.7	379.5	40.0	32.9	30.8	38.9	7.8	3.1	32.1	40.7
Mar	2,635.6	422.3	180.1	2,033.2	644.4	781.8	379.9	37.1	33.8	30.6	38.4	8.4	3.0	32.4	43.3
Apr	2,646.7	427.3	180.0	2,039.4	649.0	786.9	378.8	36.1	33.9	30.4	38.2	8.8	3.2	32.4	41.8
May	2,653.8	430.6	178.3	2,045.0	648.6	794.6	379.8	34.8	33.9	30.0	37.9	8.7	3.2	32.7	40.7
June	2,669.4	438.5	177.9	2,053.0	651.6	800.1	378.4	35.3	34.4	29.5	37.4	7.4	3.2	32.4	43.3
July	2,684.7	440.6	177.8	2,066.4	651.7	808.0	378.3	38.8	34.8	29.3	36.5	7.0	3.2	32.8	46.0
Aug	2,707.8	441.3	179.2	2,087.3	653.1	811.9	380.1	46.0	35.7	29.2	35.9	8.0	3.2	32.9	51.4
Sept	2,708.5	447.1	179.4	2,082.0	651.6	814.7	381.1	43.1	36.1	29.1	35.2	7.9	3.2	32.9	47.1
Oct	2,710.9	451.6	176.9	2,082.5	649.5	820.7	381.2	41.4	36.1	29.2	34.6	8.9	3.1	33.3	44.5
Nov	2,714.2	452.0	175.2	2,087.0	652.4	824.1	380.3	39.9	35.5	29.5	34.4	8.2	3.1	33.0	46.6
Dec p	2,719.8	447.7	175.4	2,096.7	654.5	829.2	381.9	41.3	35.8	29.9	33.9	7.6	3.1	32.7	46.9

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[1] Data are prorated averages of Wednesday figures for domestically chartered banks and averages of weekly data for foreign-related institutions beginning July 1981. Prior to July 1981, data for foreign-related institutions are averages of current and previous month-end data. Lease financing receivables are included in total loans and investments and in total loans.

[2] Excludes loans to commercial banks in the United States.

Note.—Data are not strictly comparable because of breaks in the series.

Source: Board of Governors of the Federal Reserve System.

TABLE B–71.—*Bond yields and interest rates, 1929–90*

[Percent per annum]

Year and month	U.S. Treasury securities				Corporate bonds (Moody's)		High-grade municipal bonds (Standard & Poor's)	New-home mortgage yields[3]	Commercial paper, 6 months[4]	Prime rate charged by banks[5]	Discount rate, Federal Reserve Bank of New York[5]	Federal funds rate[6]
	Bills (new issues)[1]		Constant maturities[2]									
	3-month	6-month	3-year	10-year	Aaa	Baa						
1929	....	....	....	....	4.73	5.90	4.27	....	5.85	5.50–6.00	5.16	....
1933	0.515	....	....	....	4.49	7.76	4.71	....	1.73	1.50–4.00	2.56	....
1939	.023	....	....	....	3.01	4.96	2.76	....	.59	1.50	1.00	....
1940	.014	....	....	....	2.84	4.75	2.50	....	.56	1.50	1.00	....
1941	.103	....	....	....	2.77	4.33	2.10	....	.53	1.50	1.00	....
1942	.326	....	....	....	2.83	4.28	2.36	....	.66	1.50	[7]1.00	....
1943	.373	....	....	....	2.73	3.91	2.06	....	.69	1.50	[7]1.00	....
1944	.375	....	....	....	2.72	3.61	1.86	....	.73	1.50	[7]1.00	....
1945	.375	....	....	....	2.62	3.29	1.67	....	.75	1.50	[7]1.00	....
1946	.375	....	....	....	2.53	3.05	1.64	....	.81	1.50	[7]1.00	....
1947	.594	....	....	....	2.61	3.24	2.01	....	1.03	1.50–1.75	1.00	....
1948	1.040	....	....	....	2.82	3.47	2.40	....	1.44	1.75–2.00	1.34	....
1949	1.102	....	....	....	2.66	3.42	2.21	....	1.49	2.00	1.50	....
1950	1.218	....	....	....	2.62	3.24	1.98	....	1.45	2.07	1.59	....
1951	1.552	....	....	....	2.86	3.41	2.00	....	2.16	2.56	1.75	....
1952	1.766	....	....	....	2.96	3.52	2.19	....	2.33	3.00	1.75	....
1953	1.931	....	2.47	2.85	3.20	3.74	2.72	....	2.52	3.17	1.99	....
1954	.953	....	1.63	2.40	2.90	3.51	2.37	....	1.58	3.05	1.60	....
1955	1.753	....	2.47	2.82	3.06	3.53	2.53	....	2.18	3.16	1.89	1.78
1956	2.658	....	3.19	3.18	3.36	3.88	2.93	....	3.31	3.77	2.77	2.73
1957	3.267	....	3.98	3.65	3.89	4.71	3.60	....	3.81	4.20	3.12	3.11
1958	1.839	....	2.84	3.32	3.79	4.73	3.56	....	2.46	3.83	2.15	1.57
1959	3.405	3.832	4.46	4.33	4.38	5.05	3.95	....	3.97	4.48	3.36	3.30
1960	2.928	3.247	3.98	4.12	4.41	5.19	3.73	....	3.85	4.82	3.53	3.22
1961	2.378	2.605	3.54	3.88	4.35	5.08	3.46	....	2.97	4.50	3.00	1.96
1962	2.778	2.908	3.47	3.95	4.33	5.02	3.18	....	3.26	4.50	3.00	2.68
1963	3.157	3.253	3.67	4.00	4.26	4.86	3.23	5.89	3.55	4.50	3.23	3.18
1964	3.549	3.686	4.03	4.19	4.40	4.83	3.22	5.83	3.97	4.50	3.55	3.50
1965	3.954	4.055	4.22	4.28	4.49	4.87	3.27	5.81	4.38	4.54	4.04	4.07
1966	4.881	5.082	5.23	4.92	5.13	5.67	3.82	6.25	5.55	5.63	4.50	5.11
1967	4.321	4.630	5.03	5.07	5.51	6.23	3.98	6.46	5.10	5.61	4.19	4.22
1968	5.339	5.470	5.68	5.65	6.18	6.94	4.51	6.97	5.90	6.30	5.16	5.66
1969	6.677	6.853	7.02	6.67	7.03	7.81	5.81	7.81	7.83	7.96	5.87	8.20
1970	6.458	6.562	7.29	7.35	8.04	9.11	6.51	8.45	7.71	7.91	5.95	7.18
1971	4.348	4.511	5.65	6.16	7.39	8.56	5.70	7.74	5.11	5.72	4.88	4.66
1972	4.071	4.466	5.72	6.21	7.21	8.16	5.27	7.60	4.73	5.25	4.50	4.43
1973	7.041	7.178	6.95	6.84	7.44	8.24	5.18	7.96	8.15	8.03	6.44	8.73
1974	7.886	7.926	7.82	7.56	8.57	9.50	6.09	8.92	9.84	10.81	7.83	10.50
1975	5.838	6.122	7.49	7.99	8.83	10.61	6.89	9.00	6.32	7.86	6.25	5.82
1976	4.989	5.266	6.77	7.61	8.43	9.75	6.49	9.00	5.34	6.84	5.50	5.04
1977	5.265	5.510	6.69	7.42	8.02	8.97	5.56	9.02	5.61	6.83	5.46	5.54
1978	7.221	7.572	8.29	8.41	8.73	9.49	5.90	9.56	7.99	9.06	7.46	7.93
1979	10.041	10.017	9.71	9.44	9.63	10.69	6.39	10.78	10.91	12.67	10.28	11.19
1980	11.506	11.374	11.55	11.46	11.94	13.67	8.51	12.66	12.29	15.27	11.77	13.36
1981	14.029	13.776	14.44	13.91	14.17	16.04	11.23	14.70	14.76	18.87	13.42	16.38
1982	10.686	11.084	12.92	13.00	13.79	16.11	11.57	15.14	11.89	14.86	11.02	12.26
1983	8.63	8.75	10.45	11.10	12.04	13.55	9.47	12.57	8.89	10.79	8.50	9.09
1984	9.58	9.80	11.89	12.44	12.71	14.19	10.15	12.38	10.16	12.04	8.80	10.23
1985	7.48	7.66	9.64	10.62	11.37	12.72	9.18	11.55	8.01	9.93	7.69	8.10
1986	5.98	6.03	7.06	7.68	9.02	10.39	7.38	10.17	6.39	8.33	6.33	6.81
1987	5.82	6.05	7.68	8.39	9.38	10.58	7.73	9.31	6.85	8.21	5.66	6.66
1988	6.69	6.92	8.26	8.85	9.71	10.83	7.76	9.19	7.68	9.32	6.20	7.57
1989	8.12	8.04	8.55	8.49	9.26	10.18	7.24	10.13	8.80	10.87	6.93	9.21
1990	7.51	7.47	8.26	8.55	9.32	10.36	7.25	10.05	7.95	10.01	6.98	8.10
										High-low	High-low	
1985:												
Jan	7.76	8.03	10.43	11.38	12.08	13.26	9.55	12.27	8.15	10.75–10.50	8.00– 8.00	8.35
Feb	8.22	8.34	10.55	11.51	12.13	13.23	9.66	12.21	8.69	10.50–10.50	8.00– 8.00	8.50
Mar	8.57	8.92	11.05	11.86	12.56	13.69	9.79	11.92	9.23	10.50–10.50	8.00– 8.00	8.58
Apr	8.00	8.31	10.49	11.43	12.23	13.51	9.48	12.05	8.47	10.50–10.50	8.00– 8.00	8.27
May	7.56	7.75	9.75	10.85	11.72	13.15	9.08	12.01	7.88	10.50–10.00	8.00– 7.50	7.97
June	7.01	7.16	9.05	10.16	10.94	12.40	8.78	11.75	7.38	10.00– 9.50	7.50– 7.50	7.53
July	7.05	7.16	9.18	10.31	10.97	12.43	8.90	11.34	7.57	9.50– 9.50	7.50– 7.50	7.88
Aug	7.18	7.35	9.31	10.33	11.05	12.50	9.18	11.24	7.74	9.50– 9.50	7.50– 7.50	7.90
Sept	7.08	7.27	9.37	10.37	11.07	12.48	9.37	11.17	7.86	9.50– 9.50	7.50– 7.50	7.92
Oct	7.17	7.32	9.25	10.24	11.02	12.36	9.24	11.09	7.79	9.50– 9.50	7.50– 7.50	7.99
Nov	7.20	7.26	8.88	9.78	10.55	11.99	8.64	11.01	7.69	9.50– 9.50	7.50– 7.50	8.05
Dec	7.07	7.09	8.40	9.26	10.16	11.58	8.51	10.94	7.62	9.50– 9.50	7.50– 7.50	8.27

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[1] Rate on new issues within period; bank-discount basis.

[2] Yields on the more actively traded issues adjusted to constant maturities by the Treasury Department.

[3] Effective rate (in the primary market) on conventional mortgages, reflecting fees and charges as well as contract rate and assuming, on the average, repayment at end of 10 years. Rates beginning January 1973 not strictly comparable with prior rates. Since November 1989 this series has been published by the Federal Housing Finance Board; it was formerly published by the Department of the Treasury, Office of Thrift Supervision and by the Federal Home Loan Bank Board.

See next page for continuation of table.

TABLE B-71.—*Bond yields and interest rates, 1929–90*—Continued

[Percent per annum]

Year and month	U.S. Treasury securities				Corporate bonds (Moody's)		High-grade municipal bonds (Standard & Poor's)	New-home mortgage yields [3]	Commercial paper, 6 months [4]	Prime rate charged by banks [5]	Discount rate, Federal Reserve Bank of New York [5]	Federal funds rate [6]
	Bills (new issues) [1]		Constant maturities [2]									
	3-month	6-month	3-year	10-year	Aaa	Baa						
										High-low	High-low	
1986:												
Jan	7.04	7.13	8.41	9.19	10.05	11.44	8.06	10.89	7.62	9.50–9.50	7.50–7.50	8.14
Feb	7.03	7.08	8.10	8.70	9.67	11.11	7.44	10.68	7.54	9.50–9.50	7.50–7.50	7.86
Mar	6.59	6.60	7.30	7.78	9.00	10.49	7.07	10.50	7.08	9.50–9.00	7.50–7.00	7.48
Apr	6.06	6.07	6.86	7.30	8.79	10.19	7.32	10.27	6.47	9.00–8.50	7.00–6.50	6.99
May	6.12	6.16	7.27	7.71	9.09	10.29	7.67	10.22	6.53	8.50–8.50	6.50–6.50	6.85
June	6.21	6.28	7.41	7.80	9.13	10.34	7.98	10.15	6.63	8.50–8.50	6.50–6.50	6.92
July	5.84	5.85	6.86	7.30	8.88	10.16	7.62	10.30	6.24	8.50–8.00	6.50–6.00	6.56
Aug	5.57	5.58	6.49	7.17	8.72	10.18	7.31	10.26	5.83	8.00–7.50	6.00–5.50	6.17
Sept	5.19	5.31	6.62	7.45	8.89	10.21	7.14	10.17	5.61	7.50–7.50	5.50–5.50	5.89
Oct	5.18	5.26	6.56	7.43	8.86	10.24	7.12	10.02	5.61	7.50–7.50	5.50–5.50	5.85
Nov	5.35	5.42	6.46	7.25	8.68	10.07	6.86	9.91	5.69	7.50–7.50	5.50–5.50	6.04
Dec	5.49	5.53	6.43	7.11	8.49	9.97	6.93	9.69	5.88	7.50–7.50	5.50–5.50	6.91
1987:												
Jan	5.45	5.47	6.41	7.08	8.36	9.72	6.63	9.51	5.76	7.50–7.50	5.50–5.50	6.43
Feb	5.59	5.60	6.56	7.25	8.38	9.65	6.66	9.23	5.99	7.50–7.50	5.50–5.50	6.10
Mar	5.56	5.56	6.58	7.25	8.36	9.61	6.71	9.14	6.10	7.50–7.50	5.50–5.50	6.13
Apr	5.76	5.93	7.32	8.02	8.85	10.04	7.62	9.21	6.50	7.75–7.75	5.50–5.50	6.37
May	5.75	6.11	8.02	8.61	9.33	10.51	8.10	9.37	7.04	8.25–8.00	5.50–5.50	6.85
June	5.69	5.99	7.82	8.40	9.32	10.52	7.89	9.45	7.00	8.25–8.25	5.50–5.50	6.73
July	5.78	5.86	7.74	8.45	9.42	10.61	7.83	9.41	6.72	8.25–8.25	5.50–5.50	6.58
Aug	6.00	6.14	8.03	8.76	9.67	10.80	7.90	9.38	6.81	8.25–8.25	5.50–5.50	6.73
Sept	6.32	6.57	8.67	9.42	10.18	11.31	8.36	9.37	7.55	8.75–8.25	6.00–5.50	7.22
Oct	6.40	6.86	8.75	9.52	10.52	11.62	8.84	9.25	7.96	9.25–8.75	6.00–6.00	7.29
Nov	5.81	6.23	7.99	8.86	10.01	11.23	8.09	9.30	7.17	9.00–8.75	6.00–6.00	6.69
Dec	5.80	6.36	8.13	8.99	10.11	11.29	8.07	9.15	7.49	8.75–8.75	6.00–6.00	6.77
1988:												
Jan	5.90	6.31	7.87	8.67	9.88	11.07	7.81	9.10	6.92	8.75–8.75	6.00–6.00	6.83
Feb	5.69	5.96	7.38	8.21	9.40	10.62	7.55	9.12	6.58	8.75–8.50	6.00–6.00	6.58
Mar	5.69	5.91	7.50	8.37	9.39	10.57	7.80	9.15	6.64	8.50–8.50	6.00–6.00	6.58
Apr	5.92	6.21	7.83	8.72	9.67	10.90	7.91	9.13	6.92	8.50–8.50	6.00–6.00	6.87
May	6.27	6.53	8.24	9.09	9.90	11.04	8.01	8.95	7.31	9.00–8.50	6.00–6.00	7.09
June	6.50	6.76	8.22	8.92	9.86	11.00	7.86	9.26	7.53	9.00–9.00	6.00–6.00	7.51
July	6.73	6.97	8.44	9.06	9.96	11.11	7.87	9.17	7.90	9.50–9.00	6.00–6.00	7.75
Aug	7.02	7.36	8.77	9.26	10.11	11.21	7.86	9.06	8.36	10.00–9.50	6.50–6.00	8.01
Sept	7.23	7.43	8.57	8.98	9.82	10.90	7.71	9.26	8.23	10.00–10.00	6.50–6.50	8.19
Oct	7.34	7.50	8.43	8.80	9.51	10.41	7.54	9.10	8.24	10.00–10.00	6.50–6.50	8.30
Nov	7.68	7.76	8.72	8.96	9.45	10.48	7.58	9.43	8.55	10.50–10.00	6.50–6.50	8.35
Dec	8.09	8.24	9.11	9.11	9.57	10.65	7.66	9.39	8.97	10.50–10.50	6.50–6.50	8.76
1989:												
Jan	8.29	8.38	9.20	9.09	9.62	10.65	7.41	9.52	9.02	10.50–10.50	6.50–6.50	9.12
Feb	8.48	8.49	9.32	9.17	9.64	10.61	7.47	9.82	9.35	11.50–10.50	7.00–6.50	9.36
Mar	8.83	8.87	9.61	9.36	9.80	10.67	7.61	9.99	9.97	11.50–11.50	7.00–7.00	9.85
Apr	8.70	8.73	9.40	9.18	9.79	10.61	7.49	10.17	9.78	11.50–11.50	7.00–7.00	9.84
May	8.40	8.39	8.98	8.86	9.57	10.46	7.25	10.18	9.29	11.50–11.50	7.00–7.00	9.81
June	8.22	8.00	8.37	8.28	9.10	10.03	6.97	10.42	8.80	11.50–11.00	7.00–7.00	9.53
July	7.92	7.63	7.83	8.02	8.93	9.87	6.97	10.48	8.35	11.00–10.50	7.00–7.00	9.24
Aug	7.91	7.72	8.13	8.11	8.96	9.88	7.08	10.22	8.32	10.50–10.50	7.00–7.00	8.99
Sept	7.72	7.74	8.26	8.19	9.01	9.91	7.27	10.24	8.50	10.50–10.50	7.00–7.00	9.02
Oct	7.63	7.61	8.02	8.01	8.92	9.81	7.22	10.11	8.24	10.50–10.50	7.00–7.00	8.84
Nov	7.65	7.46	7.80	7.87	8.89	9.81	7.13	10.09	8.00	10.50–10.50	7.00–7.00	8.55
Dec	7.64	7.45	7.77	7.84	8.86	9.82	7.01	10.07	7.93	10.50–10.50	7.00–7.00	8.45
1990:												
Jan	7.64	7.52	8.13	8.21	8.99	9.94	7.13	9.91	7.96	10.50–10.00	7.00–7.00	8.23
Feb	7.76	7.72	8.39	8.47	9.22	10.14	7.21	9.88	8.04	10.00–10.00	7.00–7.00	8.24
Mar	7.87	7.83	8.63	8.59	9.37	10.21	7.29	10.03	8.23	10.00–10.00	7.00–7.00	8.28
Apr	7.78	7.82	8.78	8.79	9.46	10.30	7.36	10.17	8.29	10.00–10.00	7.00–7.00	8.26
May	7.78	7.82	8.69	8.76	9.47	10.41	7.34	10.28	8.23	10.00–10.00	7.00–7.00	8.18
June	7.74	7.64	8.40	8.48	9.26	10.22	7.22	10.13	8.06	10.00–10.00	7.00–7.00	8.29
July	7.66	7.57	8.26	8.47	9.24	10.20	7.15	10.08	7.90	10.00–10.00	7.00–7.00	8.15
Aug	7.44	7.36	8.22	8.75	9.41	10.41	7.31	10.11	7.77	10.00–10.00	7.00–7.00	8.13
Sept	7.38	7.33	8.27	8.89	9.56	10.64	7.40	9.90	7.83	10.00–10.00	7.00–7.00	8.20
Oct	7.19	7.20	8.07	8.72	9.53	10.74	7.40	9.98	7.81	10.00–10.00	7.00–7.00	8.11
Nov	7.07	7.04	7.74	8.39	9.30	10.62	7.10	9.90	7.74	10.00–10.00	7.00–7.00	7.81
Dec	6.81	6.76	7.47	8.08	9.05	10.43	7.04	9.76	7.49	10.00–10.00	7.00–6.50	7.31

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[4] Bank-discount basis; prior to November 1979, data are for 4–6 months paper.

[5] For monthly data, high and low for the period. Prime rate for 1929–33 and 1947–48 are ranges of the rate in effect during the period.

[6] Since July 19, 1975, the daily effective rate is an average of the rates on a given day weighted by the volume of transactions at these rates. Prior to that date, the daily effective rate was the rate considered most representative of the day's transactions, usually the one at which most transactions occurred.

[7] From October 30, 1942, to April 24, 1946, a preferential rate of 0.50 percent was in effect for advances secured by Government securities maturing in 1 year or less.

Sources: Department of the Treasury, Board of Governors of the Federal Reserve System, Federal Housing Finance Board, Moody's Investors Service, and Standard & Poor's Corporation.

TABLE B–72.—*Total funds raised in credit markets by nonfinancial sectors, 1981–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Item	1981	1982	1983	1984	1985	1986	1987	1988	1989
	Net credit market borrowing by nonfinancial sectors								
Total net borrowing by domestic nonfinancial sectors	383.6	398.4	538.1	752.3	848.1	836.9	687.0	760.8	678.2
U.S. Government	87.4	161.3	186.6	198.8	223.6	215.0	144.9	157.5	151.6
Treasury issues	87.8	162.1	186.7	199.0	223.7	214.7	143.4	140.0	150.0
Agency issues and mortgages	–.5	–.9	–.1	–.2	–.1	.4	1.5	17.4	1.6
Private domestic nonfinancial sectors	296.2	237.1	351.5	553.5	624.5	621.9	542.1	603.3	526.6
Debt capital instruments	165.7	157.2	247.1	319.9	451.2	465.8	453.2	459.2	379.8
Tax-exempt obligations	33.7	50.4	43.3	51.0	135.4	22.7	49.3	49.8	30.4
Corporate bonds	22.8	18.7	16.0	46.1	73.5	126.8	79.4	102.9	73.7
Mortgages	109.2	88.2	187.9	222.8	242.2	316.3	324.5	306.5	275.7
Home mortgages	72.4	53.4	120.4	136.7	156.8	218.7	234.9	231.0	218.0
Multi-family residential	4.8	5.4	14.1	25.2	29.8	33.5	24.4	16.7	16.4
Commercial	22.2	25.2	51.0	62.2	62.2	73.6	71.6	60.8	42.7
Farm	9.7	4.1	2.4	–1.2	–6.6	–9.5	–6.4	–2.1	–1.5
Other debt instruments	130.5	79.9	104.4	233.6	173.3	156.1	88.9	144.1	146.8
Consumer credit	16.9	16.4	48.9	81.7	82.5	58.0	33.5	50.2	39.1
Bank loans n.e.c.	50.5	53.9	25.0	68.0	40.6	66.9	10.0	39.8	39.9
Open-market paper	14.7	–6.1	–.8	21.7	14.6	–9.3	2.3	11.9	20.4
Other	48.5	15.8	31.3	62.2	35.6	40.5	43.2	42.2	47.4
By borrowing sector:	296.2	237.1	351.5	553.5	624.5	621.9	542.1	603.3	526.6
State and local governments	17.1	27.7	23.6	28.1	90.9	36.2	48.8	45.6	29.6
Households	114.3	84.3	185.6	231.8	284.5	293.0	302.2	314.9	285.0
Nonfinancial business	164.8	125.1	142.3	293.6	249.1	292.7	191.0	242.8	211.9
Farm	16.3	6.7	3.9	–.4	–14.5	–16.3	–10.6	–7.5	1.6
Nonfarm noncorporate	44.4	71.8	81.9	123.2	129.3	99.2	77.9	65.7	50.8
Corporate	104.1	46.6	56.5	170.8	134.3	209.7	123.7	184.6	159.5
Foreign net borrowing in United States	23.5	16.0	17.3	8.4	1.2	9.7	4.5	6.3	10.9
Bonds	5.5	6.6	3.1	3.8	3.8	3.1	7.4	6.9	5.3
Bank loans n.e.c.	3.0	–5.5	3.6	–6.6	–2.8	–1.0	–3.6	–1.8	–.1
Open-market paper	3.9	1.9	6.5	6.2	6.2	11.5	2.1	8.7	13.3
U.S. Government and other loans	11.1	13.0	4.1	5.0	–6.0	–3.9	–1.4	–7.5	–7.5
Total domestic plus foreign	407.1	414.4	555.4	760.6	849.3	846.6	691.5	767.1	689.1
	Direct and indirect supply of funds to credit markets								
Total funds supplied to domestic nonfinancial sectors	383.6	398.4	538.1	752.3	848.1	836.9	687.0	760.8	678.2
Private domestic nonfinancial sectors	289.4	303.5	383.5	487.7	493.3	419.0	393.9	474.5	437.2
Deposits and currency	218.0	205.6	237.9	324.5	222.8	297.5	179.3	232.8	241.3
Checkable deposits and currency	29.2	26.6	43.5	37.2	53.7	110.8	18.2	27.6	13.2
Time and savings deposits	84.2	134.8	207.1	233.6	145.9	117.4	113.2	163.2	123.6
Money market fund shares	102.2	33.5	–39.0	49.0	7.2	43.2	28.9	20.2	85.2
Security repurchase agreements	4.2	11.1	23.1	9.8	17.7	20.2	21.6	32.9	14.9
Foreign deposits	–1.7	–.4	3.1	–5.1	–1.7	5.9	–2.5	–11.2	4.4
Credit market instruments	71.4	97.9	145.6	163.2	270.5	121.5	214.6	241.7	195.9
Foreign funds	2.9	–8.6	38.2	66.7	82.0	110.7	106.4	106.9	62.2
At banks	–22.6	–32.3	14.6	8.8	19.7	12.9	43.7	9.3	–9.9
Credit market instruments	25.5	23.7	23.7	57.9	62.3	97.8	62.7	97.6	72.1
U.S. Government and related loans, net	10.2	8.3	9.0	16.5	37.0	18.6	9.8	–13.1	–46.4
U.S. Government cash balances	–1.1	6.1	–5.5	4.0	10.3	1.7	–5.8	7.3	–3.4
Private insurance and pension reserves	83.4	114.7	115.0	124.0	131.7	119.9	135.4	177.6	140.5
Other sources	–1.2	–25.5	–2.3	53.4	93.8	166.9	47.4	7.5	88.1

See next page for continuation of table.

TABLE B-72.—*Total funds raised in credit markets by nonfinancial sectors, 1981–90*—Continued

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Item	1988				1989				1990		
	I	II	III	IV	I	II	III	IV	I	II	III
	Net credit market borrowing by nonfinancial sectors										
Total net borrowing by domestic nonfinancial sectors	756.8	812.8	778.7	694.9	746.9	666.8	678.8	620.2	762.1	624.6	708.6
U.S. Government	175.9	131.2	178.0	144.8	147.3	100.1	173.9	185.0	247.6	228.7	286.7
Treasury issues	176.4	123.5	157.1	103.2	148.5	95.0	166.8	189.6	218.1	223.4	288.0
Agency issues and mortgages	−.5	7.7	20.9	41.6	−1.2	5.1	7.1	−4.6	29.6	5.4	−1.3
Private domestic nonfinancial sectors	580.9	681.6	600.7	550.1	599.6	566.7	504.9	435.2	514.5	395.8	422.0
Debt capital instruments	395.5	539.2	463.1	439.0	412.8	390.1	369.2	347.0	366.2	331.4	294.0
Tax-exempt obligations	40.2	51.1	51.3	56.8	39.7	28.7	34.1	19.1	13.0	21.9	25.9
Corporate bonds	100.8	123.9	99.8	87.1	58.2	86.5	62.7	87.4	44.6	66.9	38.1
Mortgages	254.5	364.3	312.1	295.1	314.9	275.0	272.4	240.5	308.6	242.7	230.0
Home mortgages	193.2	287.3	231.5	212.0	225.5	211.3	221.0	214.3	237.3	225.4	207.9
Multi-family residential	14.7	14.9	18.1	19.2	23.1	21.4	11.8	9.5	21.9	−4.3	.0
Commercial	49.6	64.8	65.0	63.9	68.6	41.5	40.9	19.9	50.7	24.6	23.0
Farm	−3.0	−2.7	−2.5	.0	−2.3	.9	−1.3	−3.2	−1.4	−3.0	−.9
Other debt instruments	185.4	142.4	137.6	111.1	186.8	176.5	135.6	88.2	148.3	64.4	128.0
Consumer credit	57.1	50.3	42.3	51.2	38.2	36.9	37.1	44.1	14.6	9.8	27.7
Bank loans n.e.c.	64.4	62.4	10.2	22.2	55.9	45.1	50.8	7.7	19.6	6.5	10.5
Open-market paper	−5.7	1.1	13.2	39.0	32.3	39.5	16.9	−6.9	69.7	−6.0	17.5
Other	69.5	28.6	71.8	−1.3	60.4	55.0	30.9	43.3	44.4	54.1	72.2
By borrowing sector:	580.9	681.6	600.7	550.1	599.6	566.7	504.9	435.2	514.5	395.8	422.0
State and local governments	34.6	50.2	44.6	53.0	40.1	33.3	28.6	16.5	9.0	14.9	20.5
Households	292.0	362.7	316.5	288.5	293.4	264.0	290.8	291.8	300.0	270.2	283.4
Nonfinancial business	254.3	268.7	239.6	208.6	266.1	269.4	185.4	126.9	205.4	110.7	118.1
Farm	−9.3	−5.2	−1.0	−14.5	4.7	−5.0	−2.1	8.9	4.3	−6.1	3.9
Nonfarm noncorporate	64.7	67.3	73.4	57.3	71.0	56.9	40.2	35.0	38.4	25.5	24.3
Corporate	198.9	206.6	167.2	165.8	190.3	217.4	147.3	83.1	162.8	91.3	89.9
Foreign net borrowing in United States	7.1	3.8	4.5	9.9	3.2	−6.9	30.4	16.9	−3.5	41.1	26.3
Bonds	13.4	3.6	5.0	5.7	2.5	11.5	8.1	−1.0	28.3	27.0	1.6
Bank loans n.e.c.	.2	−3.1	−.5	−3.8	3.2	−3.2	3.7	−4.3	−6.7	−2.1	2.7
Open-market paper	3.1	6.2	11.2	14.3	16.9	−6.6	20.7	22.2	−16.5	23.0	27.3
U.S. Government and other loans	−9.6	−2.9	−11.2	−6.3	−19.4	−8.7	−2.1	.1	−8.6	−6.9	−5.3
Total domestic plus foreign	763.8	816.6	783.2	704.8	750.1	659.9	709.2	637.1	758.6	565.7	734.9
	Direct and indirect supply of funds to credit markets										
Total funds supplied to domestic nonfinancial sectors	756.8	812.8	778.7	694.9	746.9	666.8	678.8	620.2	762.1	624.6	708.6
Private domestic nonfinancial sectors	435.0	541.2	609.3	312.5	502.0	488.3	530.7	227.7	538.1	324.4	364.9
Deposits and currency	306.9	220.6	250.3	153.3	182.2	290.6	261.8	230.6	141.6	41.2	117.3
Checkable deposits and currency	33.9	31.9	17.0	27.8	−15.1	−28.9	20.7	75.9	15.0	18.7	45.0
Time and savings deposits	195.3	155.2	208.9	93.5	99.2	160.1	139.3	95.7	89.9	2.1	−39.9
Money market fund shares	54.8	−32.2	−2.5	60.9	39.4	119.2	116.7	65.6	72.8	5.8	120.9
Security repurchase agreements	29.6	45.1	33.8	22.9	35.4	29.8	13.7	−19.2	−34.8	14.6	−15.7
Foreign deposits	−6.7	20.5	−6.9	−51.8	23.5	10.4	−28.6	12.4	−1.3	.0	7.0
Credit market instruments	128.1	320.6	359.0	159.3	319.7	197.7	268.9	−2.8	396.5	283.3	247.6
Foreign funds	131.9	155.3	6.3	134.3	102.6	−40.3	162.8	23.6	68.1	76.6	203.5
At banks	−38.1	73.7	−33.7	35.3	−14.1	−35.4	30.4	−20.6	45.3	11.6	125.6
Credit market instruments	169.9	81.5	40.0	99.0	116.7	−4.9	132.4	44.2	22.8	65.0	77.9
U.S. Government and related loans, net	−16.0	−13.1	4.6	−27.8	−1.1	−101.5	−69.3	−13.7	38.3	23.4	11.4
U.S. Government cash balances	56.5	−31.1	3.4	.5	−12.6	13.9	−19.9	5.0	11.9	−15.4	16.2
Private insurance and pension reserves	183.3	178.3	133.1	215.7	162.3	123.2	82.6	193.9	120.3	179.5	142.0
Other sources	−33.9	−17.7	22.0	59.6	−6.2	183.2	−8.2	183.7	−14.6	36.0	−29.4

Source: Board of Governors of the Federal Reserve System.

TABLE B–73.—*Mortgage debt outstanding by type of property and of financing, 1939–90*

[Billions of dollars]

End of year or quarter	All properties	Farm properties	Nonfarm properties				Nonfarm properties by type of mortgage					
			Total	1- to 4-family houses	Multifamily properties	Commercial properties	Government underwritten				Conventional [2]	
							Total [1]	1- to 4-family houses			Total	1- to 4-family houses
								Total	FHA insured	VA guaranteed		
1939	35.5	6.6	28.9	16.3	5.6	7.0	1.8	1.8	1.8	....	27.1	14.5
1940	36.5	6.5	30.0	17.4	5.7	6.9	2.3	2.3	2.3	....	27.7	15.1
1941	37.6	6.4	31.2	18.4	5.9	7.0	3.0	3.0	3.0	....	28.2	15.4
1942	36.7	6.0	30.8	18.2	5.8	6.7	3.7	3.7	3.7	....	27.1	14.5
1943	35.3	5.4	29.9	17.8	5.8	6.3	4.1	4.1	4.1	....	25.8	13.7
1944	34.7	4.9	29.7	17.9	5.6	6.2	4.2	4.2	4.2	....	25.5	13.7
1945	35.5	4.8	30.8	18.6	5.7	6.4	4.3	4.3	4.1	0.2	26.5	14.3
1946	41.8	4.9	36.9	23.0	6.1	7.7	6.3	6.1	3.7	2.4	30.6	16.9
1947	48.9	5.1	43.9	28.2	6.6	9.1	9.8	9.3	3.8	5.5	34.1	18.9
1948	56.2	5.3	50.9	33.3	7.5	10.2	13.6	12.5	5.3	7.2	37.3	20.8
1949	62.7	5.6	57.1	37.6	8.6	10.8	17.1	15.0	6.9	8.1	40.0	22.6
1950	72.8	6.1	66.7	45.2	10.1	11.5	22.1	18.8	8.5	10.3	44.7	26.3
1951	82.3	6.7	75.6	51.7	11.5	12.5	26.6	22.9	9.7	13.2	49.1	28.9
1952	91.4	7.2	84.2	58.5	12.3	13.4	29.3	25.4	10.8	14.6	54.9	33.2
1953	101.3	7.7	93.6	66.1	12.9	14.5	32.1	28.1	12.0	16.1	61.5	38.0
1954	113.7	8.2	105.4	75.7	13.5	16.3	36.2	32.1	12.8	19.3	69.3	43.6
1955	129.9	9.0	120.9	88.2	14.3	18.3	42.9	38.9	14.3	24.6	78.0	49.3
1956	144.5	9.8	134.6	99.0	14.9	20.7	47.8	43.9	15.5	28.4	86.8	55.1
1957	156.5	10.4	146.1	107.6	15.3	23.2	51.6	47.2	16.5	30.7	94.6	60.4
1958	171.8	11.1	160.7	117.7	16.8	26.1	55.2	50.1	19.7	30.4	105.5	67.6
1959	190.8	12.1	178.7	130.9	18.7	29.2	59.3	53.8	23.8	30.0	119.4	77.0
1960	207.5	12.8	194.7	141.9	20.3	32.4	62.3	56.4	26.7	29.7	132.3	85.5
1961	228.0	13.9	214.1	154.6	23.0	36.5	65.6	59.1	29.5	29.6	148.5	95.5
1962	251.4	15.2	236.2	169.3	25.8	41.1	69.4	62.2	32.3	29.9	166.9	107.1
1963	278.5	16.8	261.7	186.4	29.0	46.2	73.4	65.9	35.0	30.9	188.2	120.5
1964	305.9	18.9	287.0	203.4	33.6	50.0	77.2	69.2	38.3	30.9	209.8	134.1
1965	333.3	21.2	312.1	220.5	37.2	54.5	81.2	73.1	42.0	31.1	231.0	147.4
1966	356.5	23.1	333.4	232.9	40.3	60.1	84.1	76.1	44.8	31.3	249.3	156.9
1967	381.2	25.1	356.1	247.3	43.9	64.8	88.2	79.9	47.4	32.5	267.9	167.4
1968	411.1	27.5	383.5	264.8	47.3	71.4	93.4	84.4	50.6	33.8	290.1	180.4
1969	441.6	29.4	412.2	283.2	52.2	76.9	100.2	90.2	54.5	35.7	312.0	193.0
1970	473.7	30.5	443.2	297.4	60.1	85.6	109.2	97.3	59.9	37.3	333.9	200.2
1971	524.2	32.4	491.8	325.9	70.1	95.9	120.7	105.2	65.7	39.5	371.1	220.7
1972	597.4	35.4	562.0	366.5	82.8	112.7	131.1	113.0	68.2	44.7	430.9	253.5
1973	672.6	39.8	632.8	407.9	93.1	131.7	135.0	116.2	66.2	50.0	497.7	291.7
1974	732.5	44.9	687.5	440.7	100.0	146.9	140.2	121.3	65.1	56.2	547.3	319.4
1975	791.9	49.9	742.0	482.1	100.6	159.3	147.0	127.7	66.1	61.6	595.0	354.3
1976	878.6	55.4	823.2	546.3	105.7	171.2	154.1	133.5	66.5	67.0	669.0	412.8
1977	1,010.3	63.9	946.4	642.7	114.0	189.7	161.7	141.6	68.0	73.6	784.6	501.0
1978	1,163.0	72.8	1,090.2	753.5	124.9	211.8	176.4	153.4	71.4	82.0	913.9	600.2
1979	1,328.4	86.8	1,241.7	870.5	134.9	236.3	199.0	172.9	81.0	92.0	1,042.7	697.6
1980	1,460.4	97.5	1,362.9	965.1	142.3	255.5	225.1	195.2	93.6	101.6	1,137.8	769.9
1981	1,566.7	107.2	1,459.5	1,039.8	142.1	277.5	238.9	207.6	101.3	106.2	1,220.6	832.2
1982	1,637.9	111.3	1,526.6	1,080.0	145.7	300.9	248.9	217.9	108.0	109.9	1,277.8	862.2
1983	1,825.4	113.7	1,711.7	1,198.5	160.7	352.4	279.8	248.8	127.4	121.4	1,431.9	949.6
1984	2,051.4	112.4	1,939.0	1,334.3	185.4	419.3	294.8	265.9	136.7	129.1	1,644.2	1,068.5
1985	2,303.3	105.9	2,197.4	1,501.4	214.5	481.5	328.3	288.8	153.0	135.8	1,869.1	1,212.6
1986	2,618.3	95.8	2,522.5	1,719.7	247.8	555.0	370.5	328.6	185.5	143.1	2,152.0	1,391.0
1987	2,978.4	88.9	2,889.5	1,959.0	273.4	657.2	431.4	387.9	235.5	152.4	2,458.1	1,571.0
1988	3,264.2	86.8	3,177.3	2,186.3	289.1	702.0	459.7	414.2	258.8	155.4	2,717.7	1,772.1
1989	3,538.3	85.3	3,453.0	2,404.3	304.1	744.6	486.8	440.1	282.8	157.3	2,966.1	1,964.2
1988: I	3,030.8	88.0	2,942.8	1,998.5	277.3	667.1	438.9	395.2	241.7	153.6	2,503.9	1,603.2
II	3,105.9	87.8	3,018.1	2,065.7	281.2	671.2	443.1	399.0	245.3	153.7	2,575.0	1,666.7
III	3,183.8	87.1	3,096.7	2,128.6	283.8	684.2	450.9	406.5	252.0	154.5	2,645.8	1,722.1
IV	3,264.2	86.8	3,177.3	2,186.3	289.1	702.0	459.7	414.2	258.8	155.4	2,717.7	1,772.1
1989: I	3,326.9	86.0	3,240.9	2,228.9	293.2	718.8	466.0	420.8	264.7	156.1	2,774.9	1,808.1
II	3,401.1	86.8	3,314.3	2,287.6	298.3	728.3	472.5	426.9	270.3	156.6	2,841.8	1,860.8
III	3,472.5	86.3	3,386.2	2,347.6	301.2	737.5	478.3	432.9	276.3	156.6	2,907.9	1,914.7
IV	3,538.3	85.3	3,453.0	2,404.3	304.1	744.6	486.8	440.1	282.8	157.3	2,966.1	1,964.2
1990: I	3,599.9	84.7	3,515.2	2,450.0	308.9	756.3	495.1	448.2	289.8	158.4	3,020.1	2,001.8
II	3,666.7	84.5	3,582.2	2,512.8	307.7	761.7	502.3	455.0	296.2	158.8	3,079.8	2,057.8
III	3,726.1	84.2	3,641.9	2,569.3	307.6	764.9	....	....	....	....	....	....

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[1] Includes FHA insured multifamily properties, not shown separately.

[2] Derived figures. Total includes multifamily and commercial properties, not shown separately.

Source: Board of Governors of the Federal Reserve System, based on data from various Government and private organizations.

Table B–74.—*Mortgage debt outstanding by holder, 1939–90*

[Billions of dollars]

End of year or quarter	Total	Major financial institutions				Other holders	
		Total	Savings institutions [1]	Commercial banks [2]	Life insurance companies	Federal and related agencies [3]	Individuals and others [4]
1939	35.5	18.6	8.6	4.3	5.7	5.0	11.9
1940	36.5	19.5	9.0	4.6	6.0	4.9	12.0
1941	37.6	20.7	9.4	4.9	6.4	4.7	12.2
1942	36.7	20.7	9.2	4.7	6.7	4.3	11.7
1943	35.3	20.2	9.0	4.5	6.7	3.6	11.5
1944	34.7	20.2	9.1	4.4	6.7	3.0	11.5
1945	35.5	21.0	9.6	4.8	6.6	2.4	12.1
1946	41.8	26.0	11.5	7.2	7.2	2.0	13.8
1947	48.9	31.8	13.8	9.4	8.7	1.8	15.3
1948	56.2	37.8	16.1	10.9	10.8	1.8	16.6
1949	62.7	42.9	18.3	11.6	12.9	2.3	17.5
1950	72.8	51.7	21.9	13.7	16.1	2.8	18.4
1951	82.3	59.5	25.5	14.7	19.3	3.5	19.3
1952	91.4	66.9	29.8	15.9	21.3	4.1	20.4
1953	101.3	75.1	34.9	16.9	23.3	4.6	21.7
1954	113.7	85.7	41.1	18.6	26.0	4.8	23.2
1955	129.9	99.3	48.9	21.0	29.4	5.3	25.3
1956	144.5	111.2	55.5	22.7	33.0	6.2	27.1
1957	156.5	119.7	61.2	23.3	35.2	7.7	29.1
1958	171.8	131.5	68.9	25.5	37.1	8.0	32.3
1959	190.8	145.5	78.1	28.1	39.2	10.2	35.1
1960	207.5	157.6	87.0	28.8	41.8	11.5	38.4
1961	228.0	172.6	98.0	30.4	44.2	12.2	43.1
1962	251.4	192.5	111.1	34.5	46.9	12.6	46.3
1963	278.5	217.1	127.2	39.4	50.5	11.8	49.5
1964	305.9	241.0	141.9	44.0	55.2	12.2	52.7
1965	333.3	264.6	154.9	49.7	60.0	13.5	55.2
1966	356.5	280.8	161.8	54.4	64.6	17.5	58.2
1967	381.2	298.8	172.3	59.0	67.5	20.9	61.4
1968	411.1	319.9	184.3	65.7	70.0	25.1	66.1
1969	441.6	339.1	196.4	70.7	72.0	31.1	71.4
1970	473.7	355.9	208.3	73.3	74.4	38.3	79.4
1971	524.2	394.2	236.2	82.5	75.5	46.4	83.6
1972	597.4	450.0	273.7	99.3	76.9	54.6	92.8
1973	672.6	505.4	305.0	119.1	81.4	64.8	102.4
1974	732.5	542.6	324.2	132.1	86.2	82.2	107.7
1975	791.9	581.2	355.8	136.2	89.2	101.1	109.6
1976	878.6	647.5	404.6	151.3	91.6	116.7	114.4
1977	1,010.3	745.2	469.4	179.0	96.8	140.5	124.6
1978	1,163.0	848.2	528.0	214.0	106.2	170.6	144.3
1979	1,328.4	938.2	574.6	245.2	118.4	216.0	174.3
1980	1,460.4	996.8	603.1	262.7	131.1	256.8	206.8
1981	1,566.7	1,040.5	618.5	284.2	137.7	289.4	236.8
1982	1,637.9	1,021.3	578.1	301.3	142.0	355.4	261.2
1983	1,825.4	1,108.2	626.7	330.5	151.0	433.4	283.7
1984	2,051.4	1,245.9	709.7	379.5	156.7	491.1	314.5
1985	2,303.3	1,361.5	760.5	429.2	171.8	582.0	359.8
1986	2,618.3	1,474.3	778.0	502.5	193.8	735.4	408.6
1987	2,978.4	1,665.3	860.5	592.4	212.4	863.1	450.0
1988	3,264.2	1,826.5	924.6	669.2	232.6	945.9	491.8
1989	3,538.3	1,918.9	910.3	763.4	245.3	1,079.0	540.3
1988: I	3,030.8	1,697.2	876.5	605.9	214.8	875.8	457.8
II	3,105.9	1,734.6	884.0	629.7	220.9	895.8	475.5
III	3,183.8	1,785.3	908.9	650.8	225.6	919.2	479.3
IV	3,264.2	1,826.5	924.6	669.2	232.6	945.9	491.8
1989: I	3,326.9	1,858.6	934.4	689.7	234.5	970.4	497.9
II	3,401.1	1,891.3	938.7	715.5	237.0	996.5	513.2
III	3,472.5	1,914.1	932.4	742.4	239.3	1,032.8	525.6
IV	3,538.3	1,918.9	910.3	763.4	245.3	1,079.0	540.3
1990: I	3,599.9	1,924.6	891.9	783.4	249.3	1,121.3	553.9
II	3,666.7	1,925.1	860.5	811.2	253.3	1,172.6	569.1
III	3,726.1	1,917.4	835.2	826.7	255.5	1,224.3	584.4

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[1] Includes savings banks and savings and loan associations. Data reported by Federal Savings and Loan Insurance Corporation-insured institutions include loans in process for 1987 and exclude loans in process beginning 1988.

[2] Includes loans held by nondeposit trust companies, but not by bank trust departments.

[3] Includes Government National Mortgage Association (GNMA), Federal Housing Administration, Veterans Administration, Farmers Home Administration (FmHA), and in earlier years Reconstruction Finance Corporation, Homeowners Loan Corporation, Federal Farm Mortgage Corporation, and Public Housing Administration. Also includes U.S.-sponsored agencies such as Federal National Mortgage Association (FNMA), Federal Land Banks, Federal Home Loan Mortgage Corporation (FHLMC), and mortgage pass-through securities issued or guaranteed by GNMA, FHLMC, FNMA or FmHA. Other U.S. agencies (amounts small or current separate data not readily available) included with "individuals and others."

[4] Includes private mortgage pools.

Source: Board of Governors of the Federal Reserve System, based on data from various Government and private organizations.

TABLE B–75.—*Consumer credit outstanding, 1950–90*

[Amount outstanding (end of month); millions of dollars, seasonally adjusted]

Year and month	Total consumer credit	Installment credit [1]					Noninstallment credit [4]
		Total	Automobile	Revolving [2]	Mobile home [3]	Other	
December:							
1950	23,295	15,166	6,035	....	....	9,131	8,129
1951	24,624	15,859	5,981	....	....	9,878	8,765
1952	29,766	20,121	7,651	....	....	12,470	9,645
1953	33,769	23,870	9,702	....	....	14,168	9,899
1954	35,027	24,470	9,755	....	....	14,715	10,557
1955	41,885	29,809	13,485	....	....	16,324	12,076
1956	45,503	32,660	14,499	....	....	18,161	12,843
1957	48,132	34,914	15,493	....	....	19,421	13,218
1958	48,356	34,736	14,267	....	....	20,469	13,620
1959	55,878	40,421	16,641	....	....	23,780	15,457
1960	60,035	44,335	18,108	....	....	26,227	15,700
1961	62,340	45,438	17,656	....	....	27,782	16,902
1962	68,231	50,375	20,001	....	....	30,374	17,856
1963	76,606	57,056	22,891	....	....	34,165	19,550
1964	85,989	64,674	25,865	....	....	38,809	21,315
1965	95,948	72,814	29,378	....	....	43,436	23,134
1966	101,839	78,162	31,024	....	....	47,138	23,677
1967	106,716	81,783	31,136	....	....	50,647	24,933
1968	117,231	90,112	34,352	2,022	....	53,738	27,119
1969	126,928	99,381	36,946	3,563	....	58,872	27,547
1970	131,600	103,905	36,348	4,900	2,433	60,224	27,695
1971	147,058	116,434	40,522	8,252	7,171	60,489	30,624
1972	166,009	131,258	47,835	9,391	9,468	64,564	34,751
1973	190,601	152,910	53,740	11,318	13,505	74,347	37,691
1974	199,365	162,203	54,241	13,232	14,582	80,148	37,162
1975	204,963	167,043	56,989	14,507	15,388	80,159	37,920
1976	228,162	187,782	66,821	16,595	15,738	88,628	40,380
1977	263,808	221,475	80,948	36,689	16,362	87,476	42,333
1978	308,272	261,976	98,739	45,202	16,921	101,114	46,296
1979	347,507	296,483	112,475	53,357	18,207	112,444	51,024
1980	350,269	298,154	111,991	55,111	18,736	112,317	52,115
1981	366,869	311,259	119,008	61,070	20,058	111,124	55,610
1982	383,132	325,805	125,945	66,454	22,604	110,802	57,327
1983	431,170	368,966	143,560	79,088	23,562	122,756	62,204
1984	511,315	442,602	173,564	100,280	25,861	142,897	68,713
1985	592,129	518,252	210,187	121,816	26,850	159,400	73,877
1986	649,112	573,017	247,428	135,851	27,096	162,642	76,095
1987	681,892	610,468	265,851	153,078	25,920	165,620	71,424
1988 [5]	731,521	664,701	284,556	174,057	25,201	180,887	66,820
1989	777,975	716,624	290,770	197,110	22,343	206,401	61,351
1989: Jan [5]	744,101	682,611	288,717	174,745	25,115	194,033	61,490
Feb	743,973	682,510	287,927	175,608	24,954	194,022	61,463
Mar	750,002	688,105	289,891	179,239	23,403	195,572	61,897
Apr	753,425	691,432	290,013	181,098	23,407	196,914	61,993
May	756,583	695,627	290,954	182,847	23,505	198,320	60,956
June	759,083	697,262	290,583	184,239	23,309	199,130	61,821
July	762,227	700,000	289,882	186,284	23,240	200,594	62,227
Aug	765,122	703,518	289,961	189,185	22,734	201,638	61,604
Sept	768,185	705,703	288,839	190,378	22,661	203,825	62,482
Oct	771,094	710,133	290,210	191,734	22,621	205,568	60,961
Nov	775,030	713,903	290,972	194,679	22,197	206,055	61,127
Dec	777,975	716,624	290,770	197,110	22,343	206,401	61,351
1990: Jan	779,346	717,829	290,904	199,146	22,604	205,175	61,517
Feb	779,972	717,869	289,629	199,927	22,633	205,680	62,103
Mar	782,675	720,445	290,932	202,263	22,708	204,543	62,230
Apr	781,257	720,835	288,936	203,965	22,702	205,232	60,422
May	783,857	724,485	288,931	207,153	22,815	205,585	59,372
June	785,517	724,601	287,168	208,362	22,733	206,338	60,916
July	788,189	729,329	286,791	212,138	22,795	207,605	58,860
Aug	790,680	732,385	285,283	214,492	22,976	209,635	58,295
Sept	791,574	735,222	285,261	216,804	22,672	210,484	56,352
Oct	792,151	736,595	284,402	218,381	22,491	211,320	55,556
Nov ᵖ	794,493	738,316	283,989	219,416	22,516	212,395	56,177

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[1] Installment credit covers most short- and intermediate-term credit extended to individuals through regular business channels, usually to finance the purchase of consumer goods and services or to refinance debts incurred for such purposes, and scheduled to be repaid (or with the option of repayment) in two or more installments. Credit secured by real estate is generally excluded.

[2] Consists of credit cards at retailers, gasoline companies, and commercial banks, and check credit at commercial banks. Excludes 30-day charge credit held by travel and entertainment companies. Prior to 1968, included in "other," except gasoline companies included in noninstallment credit prior to 1971. Beginning 1977, includes open-end credit at retailers, previously included in "other." Also beginning 1977, some retail credit was reclassified from commercial into consumer credit.

[3] Not reported separately prior to July 1970.

[4] Noninstallment credit is credit scheduled to be repaid in a lump sum, including single-payment loans, charge accounts, and service credit. Because of inconsistencies in the data and infrequent benchmarking, series is no longer published by the Federal Reserve Board on a regular basis. Data are shown here as a general indication of trends.

[5] Data newly available in January 1989 result in breaks in many series between December 1988 and subsequent months.

Source: Board of Governors of the Federal Reserve System.

TABLE B–76.—*Federal receipts, outlays, surplus or deficit, and debt, selected fiscal years, 1929–92*

[Billions of dollars; fiscal years]

Fiscal year or period	Total			On-budget			Off-budget			Gross Federal debt (end of period)		Addendum: Gross national product
	Receipts	Outlays	Surplus or deficit (−)	Receipts	Outlays	Surplus or deficit (−)	Receipts	Outlays	Surplus or deficit (−)	Total	Held by the public	
1929	3.9	3.1	0.7	......	......	......	......	......	......	[1] 16.9	......	......
1933	2.0	4.6	−2.6	......	......	......	......	......	......	[1] 22.5	......	......
1939	6.3	9.1	−2.8	5.8	9.2	−3.4	0.5	−0.0	0.5	48.2	41.4	88.4
1940	6.5	9.5	−2.9	6.0	9.5	−3.5	.6	−.0	.6	50.7	42.8	95.8
1941	8.7	13.7	−4.9	8.0	13.6	−5.6	.7	.0	.7	57.5	48.2	113.0
1942	14.6	35.1	−20.5	13.7	35.1	−21.3	.9	.1	.8	79.2	67.8	142.2
1943	24.0	78.6	−54.6	22.9	78.5	−55.6	1.1	.1	1.0	142.6	127.8	175.8
1944	43.7	91.3	−47.6	42.5	91.2	−48.7	1.3	.1	1.2	204.1	184.8	202.0
1945	45.2	92.7	−47.6	43.8	92.6	−48.7	1.3	.1	1.2	260.1	235.2	212.4
1946	39.3	55.2	−15.9	38.1	55.0	−17.0	1.2	.2	1.0	271.0	241.9	212.9
1947	38.5	34.5	4.0	37.1	34.2	2.9	1.5	.3	1.2	257.1	224.3	223.6
1948	41.6	29.8	11.8	39.9	29.4	10.5	1.6	.4	1.2	252.0	216.3	247.8
1949	39.4	38.8	.6	37.7	38.4	−.7	1.7	.4	1.3	252.6	214.3	263.9
1950	39.4	42.6	−3.1	37.3	42.0	−4.7	2.1	.5	1.6	256.9	219.0	266.8
1951	51.6	45.5	6.1	48.5	44.2	4.3	3.1	1.3	1.8	255.3	214.3	315.0
1952	66.2	67.7	−1.5	62.6	66.0	−3.4	3.6	1.7	1.9	259.1	214.8	342.4
1953	69.6	76.1	−6.5	65.5	73.8	−8.3	4.1	2.3	1.8	266.0	218.4	365.6
1954	69.7	70.9	−1.2	65.1	67.9	−2.8	4.6	2.9	1.7	270.8	224.5	369.5
1955	65.5	68.4	−3.0	60.4	64.5	−4.1	5.1	4.0	1.1	274.4	226.6	386.4
1956	74.6	70.6	3.9	68.2	65.7	2.5	6.4	5.0	1.5	272.7	222.2	418.1
1957	80.0	76.6	3.4	73.2	70.6	2.6	6.8	6.0	.8	272.3	219.3	440.5
1958	79.6	82.4	−2.8	71.6	74.9	−3.3	8.0	7.5	.5	279.7	226.3	450.2
1959	79.2	92.1	−12.8	71.0	83.1	−12.1	8.3	9.0	−.7	287.5	234.7	481.5
1960	92.5	92.2	.3	81.9	81.3	.5	10.6	10.9	−.2	290.5	236.8	506.7
1961	94.4	97.7	−3.3	82.3	86.0	−3.8	12.1	11.7	.4	292.6	238.4	518.2
1962	99.7	106.8	−7.1	87.4	93.3	−5.9	12.3	13.5	−1.3	302.9	248.0	557.7
1963	106.6	111.3	−4.8	92.4	96.4	−4.0	14.2	15.0	−.8	310.3	254.0	587.8
1964	112.6	118.5	−5.9	96.2	102.8	−6.5	16.4	15.7	.6	316.1	256.8	629.2
1965	116.8	118.2	−1.4	100.1	101.7	−1.6	16.7	16.5	.2	322.3	260.8	672.6
1966	130.8	134.5	−3.7	111.7	114.8	−3.1	19.1	19.7	−.6	328.5	263.7	739.0
1967	148.8	157.5	−8.6	124.4	137.0	−12.6	24.4	20.4	4.0	340.4	266.6	794.6
1968	153.0	178.1	−25.2	128.1	155.8	−27.7	24.9	22.3	2.6	368.7	289.5	849.4
1969	186.9	183.6	3.2	157.9	158.4	−.5	29.0	25.2	3.7	365.8	278.1	929.5
1970	192.8	195.6	−2.8	159.3	168.0	−8.7	33.5	27.6	5.9	380.9	283.2	990.2
1971	187.1	210.2	−23.0	151.3	177.3	−26.1	35.8	32.8	3.0	408.2	303.0	1,055.9
1972	207.3	230.7	−23.4	167.4	193.8	−26.4	39.9	36.9	3.1	435.9	322.4	1,153.1
1973	230.8	245.7	−14.9	184.7	200.1	−15.4	46.1	45.6	.5	466.3	340.9	1,281.4
1974	263.2	269.4	−6.1	209.3	217.3	−8.0	53.9	52.1	1.8	483.9	343.7	1,416.5
1975	279.1	332.3	−53.2	216.6	271.9	−55.3	62.5	60.4	2.0	541.9	394.7	1,522.5
1976	298.1	371.8	−73.7	231.7	302.2	−70.5	66.4	69.6	−3.2	629.0	477.4	1,698.2
Transition quarter	81.2	96.0	−14.7	63.2	76.6	−13.3	18.0	19.4	−1.4	643.6	495.5	448.7
1977	355.6	409.2	−53.6	278.7	328.5	−49.7	76.8	80.7	−3.9	706.4	549.1	1,933.0
1978	399.6	458.7	−59.2	314.2	369.1	−54.9	85.4	89.7	−4.3	776.6	607.1	2,171.8
1979	463.3	503.5	−40.2	365.3	403.5	−38.2	98.0	100.0	−2.0	828.9	639.8	2,447.8
1980	517.1	590.9	−73.8	403.9	476.6	−72.7	113.2	114.3	−1.1	908.5	709.3	2,670.6
1981	599.3	678.2	−78.9	469.1	543.0	−73.9	130.2	135.2	−5.0	994.3	784.8	2,986.4
1982	617.8	745.7	−127.9	474.3	594.3	−120.0	143.5	151.4	−7.9	1,136.8	919.2	3,139.1
1983	600.6	808.3	−207.8	453.2	661.2	−208.0	147.3	147.1	.2	1,371.2	1,131.0	3,321.9
1984	666.5	851.8	−185.3	500.4	686.0	−185.6	166.1	165.8	.3	1,564.1	1,300.0	3,687.7
1985	734.1	946.3	−212.3	547.9	769.5	−221.6	186.2	176.8	9.4	1,817.0	1,499.4	3,952.4
1986	769.1	990.3	−221.2	568.9	806.8	−237.9	200.2	183.5	16.7	2,120.1	1,736.2	4,180.8
1987	854.1	1,003.8	−149.7	640.7	810.0	−169.3	213.4	193.8	19.6	2,345.6	1,888.1	4,424.7
1988	909.0	1,064.1	−155.1	667.5	861.4	−193.9	241.5	202.7	38.8	2,600.8	2,050.3	4,780.4
1989	990.7	1,144.1	−153.4	727.0	933.2	−206.1	263.7	210.9	52.8	2,867.5	2,19[illegible]	5,131.3
1990	1,031.3	1,251.7	−220.4	749.7	1,026.6	−277.0	281.7	225.1	56.6	3,206.3	2,410.4	5,405.6
1991 [2]	1,091.4	1,409.6	−318.1	793.2	1,171.7	−378.5	298.3	237.9	60.4	3,617.8	2,717.6	5,615.8
1992 [2]	1,165.0	1,445.9	−280.9	849.8	1,194.2	−344.4	315.3	251.7	63.6	4,021.1	2,995.4	5,985.5

[1] Not strictly comparable with later data.

[2] Estimates.

Note.—Through fiscal year 1976, the fiscal year was on a July 1–June 30 basis; beginning October 1976 (fiscal year 1977), the fiscal year is on an October 1–September 30 basis. The 3-month period from July 1, 1976 through September 30, 1976 is a separate fiscal period known as the transition quarter.

Refunds of receipts are excluded from receipts and outlays.

See "Budget of the United States Government, Fiscal Year 1992" for additional information.

Sources: Department of Commerce (Bureau of Economic Analysis), Department of the Treasury, and Office of Management and Budget.

Table B–77.—*Federal receipts, outlays, and debt, fiscal years 1981–92*

[Millions of dollars; fiscal years]

Description	Actual					
	1981	1982	1983	1984	1985	1986
RECEIPTS AND OUTLAYS:						
Total receipts	599,272	617,766	600,562	666,457	734,057	769,091
Total outlays	678,209	745,706	808,327	851,781	946,316	990,258
Total surplus or deficit (–)	–78,936	–127,940	–207,764	–185,324	–212,260	–221,167
On-budget receipts	469,097	474,299	453,242	500,382	547,886	568,862
On-budget outlays	543,013	594,302	661,219	685,968	769,509	806,760
On-budget surplus or deficit (–)	–73,916	–120,003	–207,977	–185,586	–221,623	–237,898
Off-budget receipts	130,176	143,467	147,320	166,075	186,171	200,228
Off-budget outlays	135,196	151,404	147,108	165,813	176,807	183,498
Off-budget surplus or deficit (–)	–5,020	–7,937	212	262	9,363	16,731
OUTSTANDING DEBT, END OF PERIOD:						
Gross Federal debt	994,298	1,136,798	1,371,164	1,564,110	1,816,974	2,120,082
Held by Government accounts	209,507	217,560	240,114	264,159	317,612	383,919
Held by the public	784,791	919,238	1,131,049	1,299,951	1,499,362	1,736,163
Federal Reserve System	124,466	134,497	155,527	155,122	169,806	190,855
Other	660,325	784,741	975,522	1,144,829	1,329,556	1,545,308
RECEIPTS: ON-BUDGET AND OFF-BUDGET	599,272	617,766	600,562	666,457	734,057	769,091
Individual income taxes	285,917	297,744	288,938	298,415	334,531	348,959
Corporation income taxes	61,137	49,207	37,022	56,893	61,331	63,143
Social insurance taxes and contributions	182,720	201,498	208,994	239,376	265,163	283,901
On-budget	52,545	58,031	61,674	73,301	78,992	83,673
Off-budget	130,176	143,467	147,320	166,075	186,171	200,228
Excise taxes	40,839	36,311	35,300	37,361	35,992	32,919
Estate and gift taxes	6,787	7,991	6,053	6,010	6,422	6,958
Customs duties and fees	8,083	8,854	8,655	11,370	12,079	13,327
Miscellaneous receipts:						
Deposits of earnings by Federal Reserve System	12,834	15,186	14,492	15,684	17,059	18,374
All other	956	975	1,108	1,347	1,480	1,510
OUTLAYS: ON-BUDGET AND OFF-BUDGET	678,209	745,706	808,327	851,781	946,316	990,258
National defense	157,513	185,309	209,903	227,413	252,748	273,375
International affairs	13,104	12,300	11,848	15,876	16,176	14,152
General science, space, and technology	6,469	7,200	7,935	8,317	8,627	8,976
Energy	15,166	13,527	9,353	7,086	5,685	4,735
Natural resources and environment	13,568	12,998	12,672	12,593	13,357	13,639
Agriculture	11,323	15,944	22,901	13,613	25,565	31,449
Commerce and housing credit	8,206	6,256	6,681	6,917	4,229	4,890
On-budget	8,206	6,256	6,681	6,917	4,229	4,890
Off-budget						
Transportation	23,379	20,625	21,334	23,669	25,838	28,117
Community and regional development	10,568	8,347	7,560	7,673	7,680	7,233
Education, training, employment, and social services	33,709	27,029	26,606	27,579	29,342	30,585
Health	26,866	27,445	28,641	30,417	33,542	35,936
Medicare	39,149	46,567	52,588	57,540	65,822	70,164
Income security	99,723	107,717	122,598	112,668	128,200	119,796
Social security	139,584	155,964	170,724	178,223	188,623	198,757
On-budget	670	844	19,993	7,056	5,189	8,072
Off-budget	138,914	155,120	150,731	171,167	183,434	190,684
Veterans benefits and services	22,991	23,958	24,846	25,614	26,292	26,356
Administration of justice	4,769	4,712	5,105	5,663	6,270	6,572
General government	11,429	10,914	11,235	11,817	11,588	12,564
Net interest	68,734	84,995	89,774	111,058	129,430	135,969
On-budget	71,022	87,065	91,619	114,368	133,548	140,298
Off-budget	–2,288	–2,071	–1,845	–3,310	–4,118	–4,329
Allowances						
Undistributed offsetting receipts	–28,041	–26,099	–33,976	–31,957	–32,698	–33,007
On-budget	–26,611	–24,453	–32,198	–29,913	–30,189	–30,150
Off-budget	–1,430	–1,646	–1,778	–2,044	–2,509	–2,857

See next page for continuation of table.

TABLE B–77.—*Federal receipts, outlays, and debt, fiscal years 1981–92*—Continued

[Millions of dollars; fiscal years]

Description	Actual				Estimates	
	1987	1988	1989	1990	1991	1992
RECEIPTS AND OUTLAYS:						
Total receipts	854,143	908,954	990,691	1,031,308	1,091,440	1,165,029
Total outlays	1,003,830	1,064,051	1,144,069	1,251,703	1,409,563	1,445,902
Total surplus or deficit (–)	–149,687	–155,097	–153,378	–220,396	–318,123	–280,874
On-budget receipts	640,741	667,463	727,026	749,652	793,153	849,775
On-budget outlays	809,998	861,360	933,158	1,026,638	1,171,658	1,194,205
On-budget surplus or deficit (–)	–169,257	–193,897	–206,132	–276,986	–378,505	–344,430
Off-budget receipts	213,402	241,491	263,666	281,656	298,287	315,254
Off-budget outlays	193,832	202,691	210,911	225,065	237,905	251,697
Off-budget surplus or deficit (–)	19,570	38,800	52,754	56,590	60,382	63,557
OUTSTANDING DEBT, END OF PERIOD:						
Gross Federal debt	2,345,578	2,600,760	2,867,538	3,206,336	3,617,837	4,021,124
Held by Government accounts	457,444	550,507	677,214	795,906	900,214	1,025,731
Held by the public	1,888,134	2,050,252	2,190,324	2,410,431	2,717,623	2,995,393
Federal Reserve System	212,040	229,218	220,088	234,410	....	....
Other	1,676,094	1,821,034	1,970,236	2,176,021	....	....
RECEIPTS: ON-BUDGET AND OFF-BUDGET	854,143	908,954	990,691	1,031,308	1,091,440	1,165,029
Individual income taxes	392,557	401,181	445,690	466,884	492,635	529,518
Corporation income taxes	83,926	94,508	103,291	93,507	95,866	101,913
Social insurance taxes and contributions	303,318	334,335	359,416	380,047	401,955	429,363
On-budget	89,916	92,845	95,751	98,392	103,668	114,109
Off-budget	213,402	241,491	263,666	281,656	298,287	315,254
Excise taxes	32,457	35,227	34,386	35,345	44,810	47,768
Estate and gift taxes	7,493	7,594	8,745	11,500	12,241	13,265
Customs duties and fees	15,085	16,198	16,334	16,707	17,698	19,295
Miscellaneous receipts:						
Deposits of earnings by Federal Reserve System	16,817	17,163	19,604	24,319	23,384	20,741
All other	2,490	2,747	3,225	2,997	2,852	3,166
OUTLAYS: ON-BUDGET AND OFF-BUDGET	1,003,830	1,064,051	1,144,069	1,251,703	1,409,563	1,445,902
National defense	281,999	290,361	303,559	299,331	298,910	295,245
International affairs	11,649	10,471	9,573	13,764	16,953	17,814
General science, space, and technology	9,216	10,841	12,838	14,444	15,781	17,452
Energy	4,115	2,297	3,702	2,358	2,617	3,710
Natural resources and environment	13,363	14,606	16,182	17,067	18,821	19,545
Agriculture	26,606	17,210	16,919	11,958	15,857	15,261
Commerce and housing credit	6,182	18,815	29,211	67,147	119,506	92,788
On-budget	6,182	18,815	29,520	65,522	119,447	93,912
Off-budget	....	....	–310	1,626	59	–1,124
Transportation	26,222	27,272	27,608	29,485	31,469	32,707
Community and regional development	5,051	5,294	5,362	8,498	7,710	6,457
Education, training, employment, and social services	29,724	31,938	36,674	38,497	42,800	45,530
Health	39,967	44,487	48,390	57,716	71,188	81,260
Medicare	75,120	78,878	84,964	98,102	104,433	113,720
Income security	123,250	129,332	136,031	147,277	173,189	184,839
Social security	207,353	219,341	232,542	248,623	268,965	288,632
On-budget	4,930	4,852	5,069	3,625	5,127	5,847
Off-budget	202,422	214,489	227,473	244,998	263,837	282,785
Veterans benefits and services	26,782	29,428	30,066	29,112	31,483	33,001
Administration of justice	7,553	9,236	9,474	9,995	12,567	14,486
General government	7,565	9,464	9,017	10,724	11,169	13,183
Net interest	138,570	151,748	169,166	184,221	197,038	206,343
On-budget	143,860	159,164	180,561	200,212	217,202	230,076
Off-budget	–5,290	–7,416	–11,395	–15,991	–20,164	–23,733
Allowances	....	....	....	....	8,200	4,708
Undistributed offsetting receipts	–36,455	–36,967	–37,212	–36,615	–39,093	–40,780
On-budget	–33,155	–32,585	–32,354	–31,048	–33,266	–34,549
Off-budget	–3,300	–4,382	–4,858	–5,567	–5,827	–6,231

Note.—Through fiscal year 1976, the fiscal year was on a July 1–June 30 basis; beginning October 1976 (fiscal year 1977), the fiscal year is on an October 1–September 30 basis. The 3-month period from July 1, 1976 through September 30, 1976 is a separate fiscal period known as the transition quarter.

Refunds of receipts are excluded from receipts and outlays.

See "Budget of the United States Government, Fiscal Year 1992" for additional information.

Sources: Department of the Treasury and Office of Management and Budget.

TABLE B–78.—*Relation of Federal Government receipts and expenditures in the national income and product accounts to the budget, fiscal years 1990–92*

[Billions of dollars; fiscal years]

Receipts and expenditures	1990	Estimate	
		1991	1992
RECEIPTS			
Total on-budget and off-budget receipts	1,031.3	1,091.4	1,165.0
Government contributions for employee retirement (grossing)	44.5	48.4	52.0
Other netting and grossing	19.1	20.5	21.6
Timing adjustments	2.0	−9.8	.8
Geographic exclusions	−2.0	−2.2	−2.3
Federal sector, national income and product accounts, receipts	1,094.9	1,148.4	1,237.2
EXPENDITURES			
Total on-budget and off-budget outlays	1,251.7	1,409.6	1,445.9
Government contributions for employee retirement (grossing)	44.5	48.4	52.0
Other netting and grossing	19.1	20.5	21.6
Lending transactions	−7.2	−8.5	−10.6
Deposit insurance and other financial transactions	−57.1	−110.2	−83.8
Defense timing adjustments	5.3	−.9	−.4
Other timing adjustments	2.8	−.4	.2
Geographic exclusions	−6.2	−6.8	−7.1
Bonuses on Outer Continental Shelf land leases	.7	1.1	.5
Other	−.4	−.7	.7
Federal sector, national income and product accounts, expenditures	1,253.2	1,352.1	1,419.0

Note.—See Note, Table B–76.
For further details, see *Survey of Current Business*, February 1991.

Sources: Department of Commerce (Bureau of Economic Analysis), Department of the Treasury, and Office of Management and Budget.

TABLE B–79.—*Federal and State and local government receipts and expenditures, national income and product accounts, 1929–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Total government			Federal Government			State and local government		
	Receipts	Expenditures	Surplus or deficit (−), national income and product accounts	Receipts	Expenditures	Surplus or deficit (−), national income and product accounts	Receipts	Expenditures	Surplus or deficit (−), national income and product accounts
1929	11.3	10.3	1.0	3.8	2.7	1.2	7.6	7.8	−0.2
1933	9.4	10.7	−1.4	2.7	4.0	−1.3	7.2	7.2	−.1
1939	15.4	17.6	−2.2	6.8	9.0	−2.2	9.6	9.6	.0
1940	17.8	18.5	−.7	8.7	10.0	−1.3	10.0	9.3	.6
1941	25.0	28.8	−3.8	15.5	20.5	−5.1	10.4	9.1	1.3
1942	32.7	64.1	−31.4	23.0	56.1	−33.1	10.6	8.8	1.8
1943	49.2	93.4	−44.2	39.3	85.9	−46.6	10.9	8.4	2.4
1944	51.2	103.1	−51.8	41.1	95.6	−54.5	11.1	8.5	2.7
1945	53.4	92.9	−39.5	42.7	84.7	−42.1	11.6	9.0	2.6
1946	52.6	47.2	5.4	40.7	37.2	3.5	13.0	11.1	1.9
1947	57.8	43.4	14.4	44.1	30.8	13.4	15.4	14.4	1.0
1948	59.6	51.1	8.4	43.9	35.5	8.3	17.7	17.6	.1
1949	56.6	60.0	−3.4	39.4	42.0	−2.6	19.5	20.2	−.7
1950	69.4	61.4	8.0	50.4	41.2	9.2	21.3	22.5	−1.2
1951	85.6	79.5	6.1	64.6	58.1	6.5	23.4	23.9	−.4
1952	90.5	94.3	−3.8	67.7	71.4	−3.7	25.4	25.5	−.0
1953	95.0	102.0	−7.0	70.4	77.6	−7.1	27.4	27.3	.1
1954	90.4	97.5	−7.1	64.2	70.3	−6.0	29.0	30.2	−1.1
1955	101.6	98.5	3.1	73.1	68.6	4.4	31.7	32.9	−1.3
1956	110.2	105.0	5.2	78.5	72.5	6.1	35.0	35.9	−.9
1957	116.7	115.8	.9	82.5	80.2	2.3	38.5	39.8	−1.4
1958	115.7	128.3	−12.6	79.3	89.6	−10.3	42.0	44.4	−2.4
1959	130.3	131.9	−1.6	90.6	91.7	−1.1	46.6	47.0	−.4
1960	140.4	137.3	3.1	96.9	93.9	3.0	50.0	49.9	.1
1961	145.9	150.1	−4.3	99.0	102.9	−3.9	54.1	54.5	−.4
1962	157.9	161.6	−3.8	107.2	111.4	−4.2	58.6	58.2	.5
1963	169.8	169.1	.7	115.6	115.3	.3	63.4	62.9	.5
1964	175.6	177.8	−2.3	116.2	119.5	−3.3	69.8	68.8	1.0
1965	190.2	189.6	.5	125.8	125.3	.5	75.5	75.5	−.0
1966	214.4	215.6	−1.3	143.5	145.3	−1.8	85.2	84.7	.5
1967	230.8	245.0	−14.2	152.6	165.8	−13.2	94.1	95.2	−1.1
1968	266.2	272.2	−6.0	176.9	182.9	−6.0	107.9	107.8	.1
1969	300.1	290.2	9.9	199.7	191.3	8.4	120.8	119.3	1.5
1970	306.8	317.4	−10.6	195.4	207.8	−12.4	135.8	134.0	1.8
1971	327.3	346.8	−19.5	202.7	224.8	−22.0	153.6	151.0	2.6
1972	374.0	377.3	−3.4	232.2	249.0	−16.8	179.3	165.8	13.5
1973	419.6	411.7	7.9	263.7	269.3	−5.6	196.4	182.9	13.5
1974	463.1	467.4	−4.3	293.9	305.5	−11.6	213.1	205.9	7.2
1975	480.0	544.9	−64.9	294.9	364.2	−69.4	239.6	235.2	4.5
1976	549.1	587.5	−38.4	340.1	393.7	−53.5	270.1	254.9	15.2
1977	616.6	635.7	−19.1	384.1	430.1	−46.0	300.1	273.2	26.9
1978	694.4	694.8	−.4	441.4	470.7	−29.3	330.3	301.3	28.9
1979	779.8	768.3	11.5	505.0	521.1	−16.1	355.3	327.7	27.6
1980	855.1	889.6	−34.5	553.8	615.1	−61.3	390.0	363.2	26.8
1981	977.2	1,006.9	−29.7	639.5	703.3	−63.8	425.6	391.4	34.1
1982	1,000.8	1,111.6	−110.8	635.3	781.2	−145.9	449.4	414.3	35.1
1983	1,061.3	1,189.9	−128.6	659.9	835.9	−176.0	487.7	440.2	47.5
1984	1,172.9	1,277.9	−105.0	726.0	895.6	−169.6	540.5	475.9	64.6
1985	1,270.8	1,402.6	−131.8	788.7	985.6	−196.9	581.8	516.7	65.1
1986	1,347.4	1,491.5	−144.1	827.9	1,034.8	−206.9	626.3	563.5	62.8
1987	1,466.4	1,573.5	−107.1	913.8	1,071.9	−158.2	655.2	604.1	51.0
1988	1,559.0	1,654.2	−95.3	972.4	1,114.2	−141.7	697.6	651.1	46.5
1989	1,684.6	1,772.4	−87.8	1,052.9	1,187.2	−134.3	749.9	703.5	46.4
1990 ᵖ	1,781.2	1,907.1	−126.0	1,111.7	1,273.0	−161.3	800.1	764.7	35.4
1982: IV	1,008.4	1,175.3	−166.8	633.1	835.7	−202.6	459.8	424.1	35.8
1983: IV	1,095.3	1,208.2	−112.9	675.5	844.7	−169.2	505.8	449.5	56.4
1984: IV	1,200.8	1,322.9	−122.1	742.7	930.2	−187.5	554.5	489.1	65.4
1985: IV	1,299.9	1,445.8	−145.9	805.3	1,017.5	−212.2	598.0	531.8	66.3
1986: IV	1,388.4	1,519.6	−131.3	853.8	1,042.8	−189.0	637.6	579.8	57.8
1987: IV	1,504.6	1,619.3	−114.7	940.0	1,101.7	−161.7	667.3	620.3	46.9
1988: I	1,512.7	1,620.9	−108.2	943.0	1,096.7	−153.7	678.9	633.4	45.5
II	1,554.8	1,643.4	−88.6	972.5	1,109.4	−136.9	693.9	645.6	48.3
III	1,567.7	1,641.0	−73.3	976.7	1,096.8	−120.1	702.2	655.4	46.8
IV	1,600.7	1,711.8	−111.0	997.5	1,153.8	−156.3	715.5	670.2	45.2
1989: I	1,661.4	1,745.1	−83.7	1,045.4	1,178.0	−132.6	732.6	683.7	48.9
II	1,691.9	1,764.3	−72.4	1,062.2	1,184.9	−122.7	746.7	696.5	50.3
III	1,686.2	1,769.9	−83.6	1,048.1	1,179.8	−131.7	755.7	707.6	48.1
IV	1,698.8	1,810.4	−111.6	1,055.7	1,205.8	−150.1	764.6	726.1	38.5
1990: I	1,735.6	1,865.8	−130.2	1,080.6	1,248.8	−168.3	783.6	745.5	38.1
II	1,766.5	1,893.9	−127.3	1,105.8	1,271.7	−166.0	792.2	753.6	38.6
III	1,804.8	1,911.2	−106.4	1,125.9	1,271.6	−145.7	808.6	769.4	39.3
IV ᵖ	....	1,957.7	....	....	1,300.0	....	....	790.3	....

Note.—Federal grants-in-aid to State and local governments are reflected in Federal expenditures and State and local receipts. Total government receipts and expenditures have been adjusted to eliminate this duplication.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–80.—*Federal and State and local government receipts and expenditures, national income and product accounts, by major type, 1940–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Receipts					Expenditures								Surplus or deficit (−), national income and product accounts	Addendum: Grants-in-aid to State and local governments
	Total	Personal tax and nontax receipts	Corporate profits tax accruals	Indirect business tax and nontax accruals	Contributions for social insurance	Total [1]	Purchases of goods and services	Transfer payments	Net interest paid			Less: Dividends received by government [2]	Subsidies less current surplus of government enterprises		
									Total	Interest paid	Less: Interest received by government [2]				
1940	17.8	2.6	2.8	10.1	2.4	18.5	14.2	2.7	1.2	....	....	....	0.4	−0.7	0.9
1941	25.0	3.3	7.6	11.3	2.8	28.8	25.0	2.6	1.2	....	....	....	.1	−3.8	.8
1942	32.7	5.9	11.4	11.8	3.5	64.1	59.9	2.7	1.4	....	....	....	.1	−31.4	.9
1943	49.2	17.8	14.1	12.8	4.6	93.4	88.9	2.4	1.9	....	....	....	.1	−44.2	.9
1944	51.2	18.9	12.9	14.2	5.2	103.1	97.1	3.0	2.4	....	....	....	.6	−51.8	.9
1945	53.4	20.8	10.7	15.5	6.3	92.9	83.0	6.0	3.2	....	....	....	.7	−39.5	.9
1946	52.6	18.7	9.1	17.1	7.7	47.2	29.1	13.1	4.1	....	....	....	.9	5.4	1.1
1947	57.8	21.4	11.3	18.4	6.7	43.4	26.4	13.1	4.2	....	....	....	−.2	14.4	1.7
1948	59.6	21.0	12.4	20.1	6.0	51.1	32.6	14.5	4.2	....	....	....	−.1	8.4	2.0
1949	56.6	18.5	10.2	21.3	6.6	60.0	39.0	16.9	4.3	....	....	....	−.3	−3.4	2.2
1950	69.4	20.6	17.9	23.4	7.4	61.4	38.8	18.0	4.4	....	....	....	.1	8.0	2.3
1951	85.6	28.9	22.6	25.3	8.8	79.5	60.4	14.8	4.5	....	....	....	−.1	6.1	2.5
1952	90.5	34.0	19.4	27.7	9.3	94.3	75.8	14.3	4.5	....	....	....	−.3	−3.8	2.6
1953	95.0	35.5	20.3	29.7	9.6	102.0	82.8	15.1	4.6	....	....	....	−.5	−7.0	2.8
1954	90.4	32.5	17.6	29.6	10.6	97.5	76.0	17.1	4.7	....	....	....	−.3	−7.1	2.9
1955	101.6	35.4	22.0	32.2	12.0	98.5	75.3	18.5	4.7	....	....	....	.0	3.1	3.1
1956	110.2	39.7	22.0	35.0	13.5	105.0	79.7	19.4	5.2	....	....	....	.7	5.2	3.3
1957	116.7	42.4	21.4	37.4	15.5	115.8	87.3	22.2	5.6	....	....	....	.7	.9	4.2
1958	115.7	42.2	19.0	38.6	15.9	128.3	95.4	26.5	5.4	....	....	....	1.1	−12.6	5.6
1959	130.3	46.1	23.6	41.7	18.8	131.9	97.9	27.6	6.3	....	....	....	.1	−1.6	6.8
1960	140.4	50.5	22.7	45.3	21.9	137.3	100.6	29.4	6.9	10.1	3.3	....	.4	3.1	6.5
1961	145.9	52.2	22.8	48.0	22.9	150.1	108.4	33.7	6.4	9.9	3.5	....	1.7	−4.3	7.2
1962	157.9	57.0	24.0	51.5	25.4	161.6	118.2	34.8	6.9	10.8	3.9	....	1.8	−3.8	8.0
1963	169.8	60.5	26.2	54.6	28.5	169.1	123.8	36.8	7.4	11.6	4.2	....	1.1	.7	9.1
1964	175.6	58.8	28.0	58.7	30.1	177.8	130.0	38.3	7.9	12.5	4.6	....	1.7	−2.3	10.4
1965	190.2	65.2	30.9	62.5	31.6	189.6	138.6	41.3	8.1	13.2	5.1	....	1.6	.5	11.1
1966	214.4	74.9	33.7	65.2	40.6	215.6	158.6	46.0	8.5	14.5	6.0	....	2.5	−1.3	14.4
1967	230.8	82.4	32.7	70.1	45.5	245.0	179.7	54.7	8.9	15.7	6.8	....	1.6	−14.2	15.9
1968	266.2	97.7	39.4	78.7	50.4	272.2	197.7	62.9	10.3	18.1	7.7	0.1	1.4	−6.0	18.6
1969	300.1	116.3	39.7	86.3	57.9	290.2	207.3	69.7	11.5	19.8	8.3	.2	1.9	9.9	20.3
1970	306.8	116.2	34.4	94.0	62.2	317.4	218.2	84.1	12.4	22.3	9.9	.2	2.9	−10.6	24.4
1971	327.3	117.3	37.7	103.4	68.9	346.8	232.4	99.8	12.5	23.1	10.6	.3	2.6	−19.5	29.0
1972	374.0	142.0	41.9	111.1	79.0	377.3	250.0	111.3	12.9	24.8	11.9	.3	3.7	−3.4	37.5
1973	419.6	152.0	49.3	120.8	97.6	411.7	266.5	127.0	15.2	29.6	14.3	.5	3.5	7.9	40.6
1974	463.1	171.8	51.8	129.0	110.5	467.4	299.1	150.9	16.5	33.6	17.1	.9	1.2	−4.3	43.9
1975	480.0	170.6	50.9	140.0	118.5	544.9	335.0	189.6	18.8	37.7	18.9	.9	2.4	−64.9	54.6
1976	549.1	198.7	64.2	151.7	134.5	587.5	356.9	207.2	23.2	43.6	20.4	.9	1.0	−38.4	61.1
1977	616.6	228.1	73.0	165.7	149.8	635.7	387.3	221.6	25.1	47.9	22.8	1.3	3.0	−19.1	67.5
1978	694.4	261.1	83.5	178.1	171.7	694.8	425.2	239.5	28.2	56.5	28.3	1.7	3.9	−.4	77.3
1979	779.8	304.7	88.0	189.4	197.8	768.3	467.8	268.0	30.8	68.2	37.5	2.0	3.5	11.5	80.5
1980	855.1	340.5	84.8	213.3	216.5	889.6	530.3	319.2	36.3	83.2	46.9	1.9	5.7	−34.5	88.7
1981	977.2	393.3	81.1	251.5	251.2	1,006.9	588.1	362.2	52.2	109.1	56.9	2.3	6.7	−29.7	87.9
1982	1,000.8	409.3	63.1	258.8	269.6	1,111.6	641.7	404.0	60.1	128.3	68.1	2.9	8.7	−110.8	83.9
1983	1,061.3	410.5	77.2	282.6	291.0	1,189.9	675.0	435.1	68.1	145.1	77.1	2.8	14.1	−128.6	86.2
1984	1,172.9	440.2	93.9	313.9	324.9	1,277.9	735.9	448.7	87.2	173.5	86.3	3.5	9.9	−105.0	93.6
1985	1,270.8	486.6	96.4	333.6	354.1	1,402.6	820.8	481.2	97.7	194.2	96.5	4.5	7.2	−131.8	99.7
1986	1,347.4	512.9	106.3	348.9	379.2	1,491.5	872.2	510.8	101.2	206.1	104.9	5.5	12.8	−144.1	106.8
1987	1,466.4	571.6	126.9	367.8	400.1	1,573.5	921.4	533.8	107.3	214.6	107.3	6.4	17.4	−107.1	102.6
1988	1,559.0	591.6	136.2	388.7	442.6	1,654.2	962.5	570.5	112.7	229.0	116.3	7.8	16.2	−95.3	111.1
1989	1,684.6	658.8	135.1	414.0	476.8	1,772.4	1,025.6	617.8	131.8	250.7	118.9	9.1	6.3	−87.8	118.2
1990 ᵖ	1,781.2	699.8	134.1	440.4	506.9	1,907.1	1,098.0	672.1	144.7	269.3	124.5	10.1	2.5	−126.0	130.6
1982: IV	1,008.4	411.1	59.8	264.5	273.0	1,175.3	671.8	429.7	61.4	133.2	71.8	3.1	15.4	−166.8	84.5
1983: IV	1,095.3	413.9	88.1	294.1	299.2	1,208.2	676.1	441.1	74.2	154.7	80.5	2.9	19.6	−112.9	86.0
1984: IV	1,200.8	459.7	87.0	322.7	331.5	1,322.9	764.5	458.5	96.1	185.3	89.2	4.0	8.4	−122.1	96.3
1985: IV	1,299.9	499.6	99.8	338.3	362.1	1,445.8	856.7	490.0	98.8	199.5	100.7	4.9	5.3	−145.9	103.5
1986: IV	1,388.4	534.4	113.1	353.1	387.7	1,519.6	888.9	520.2	100.8	207.0	106.2	5.9	15.6	−131.3	103.0
1987: IV	1,504.6	588.6	132.1	375.3	408.7	1,619.3	942.0	544.5	112.5	221.2	108.8	6.7	26.7	−114.7	102.7
1988: I	1,512.7	572.7	128.2	380.2	431.6	1,620.9	940.9	560.8	107.5	224.9	117.4	7.1	18.7	−108.2	109.2
II	1,554.8	594.0	136.7	385.3	438.8	1,643.4	955.4	564.9	111.3	225.5	114.3	7.7	19.5	−88.6	111.6
III	1,567.7	592.2	137.9	391.6	446.0	1,641.0	953.8	572.1	114.3	230.2	116.0	8.0	8.8	−73.3	111.2
IV	1,600.7	607.3	142.1	397.6	453.8	1,711.8	1,000.0	584.2	117.8	235.4	117.6	8.2	17.9	−111.0	112.2
1989: I	1,661.4	640.5	148.3	403.5	469.1	1,745.1	1,008.5	600.7	127.4	244.4	117.0	8.5	17.0	−83.7	116.7
II	1,691.9	665.5	140.8	411.1	474.6	1,764.3	1,022.7	608.6	133.4	250.4	117.0	8.9	8.5	−72.4	117.0
III	1,686.2	659.5	127.8	419.9	479.1	1,769.9	1,027.8	622.1	131.8	252.7	121.0	9.3	−2.6	−83.6	117.6
IV	1,698.8	669.6	123.5	421.5	484.2	1,810.4	1,043.3	639.9	134.5	255.3	120.7	9.5	2.2	−111.6	121.5
1990: I	1,735.6	675.1	129.9	431.7	498.9	1,865.8	1,070.1	659.9	137.1	260.1	123.0	9.7	8.4	−130.2	128.5
II	1,766.5	696.5	133.1	433.0	503.9	1,893.9	1,086.4	670.9	142.9	265.5	122.6	10.0	3.6	−127.3	131.5
III	1,804.8	709.5	139.1	444.9	511.3	1,911.2	1,102.8	678.1	148.0	274.0	125.9	10.2	−7.5	−106.4	129.8
IV ᵖ	....	718.1	....	451.9	513.6	1,957.7	1,132.7	679.3	150.9	277.5	126.6	10.5	5.3	....	132.6

[1] Includes an item for the difference between wage accruals and disbursements, not shown separately.

[2] Prior to 1968, dividends received is included in interest received.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–81.—*Federal Government receipts and expenditures, national income and product accounts, 1969–92*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Receipts					Expenditures								Surplus or deficit (−), national income and product accounts
	Total	Personal tax and nontax receipts	Corporate profits tax accruals	Indirect business tax and nontax accruals	Contributions for social insurance	Total [1]	Purchases of goods and services		Transfer payments		Grants-in-aid to State and local governments	Net interest paid	Subsidies less current surplus of government enterprises	
							Total	National defense	To persons	To foreigners				
Fiscal: [2]														
1969	192.5	90.2	36.8	18.6	46.9	187.3	100.3	78.5	48.9	2.3	19.2	12.0	4.7	5.2
1970	198.0	94.0	32.9	19.1	52.0	198.7	99.8	78.2	55.3	2.2	22.6	13.5	5.5	−.7
1971	196.2	87.9	31.9	20.0	56.5	216.8	98.3	75.7	68.1	2.5	26.8	14.1	7.0	−20.5
1972	217.9	100.5	34.2	19.8	63.4	237.1	104.4	76.2	76.5	3.0	32.6	14.0	6.5	−19.2
1973	245.3	107.5	40.9	20.6	76.3	260.4	105.3	77.1	87.6	2.8	40.4	15.7	9.1	−15.2
1974	277.2	122.7	43.4	21.3	89.8	283.9	109.3	78.8	102.3	3.2	41.6	19.6	7.7	−6.8
1975	290.5	127.5	42.1	22.1	98.8	335.7	123.9	86.3	131.9	3.7	48.4	21.7	5.9	−45.3
1976	322.6	137.1	52.1	24.2	109.1	378.9	132.2	91.5	154.3	3.7	57.5	25.1	6.2	−56.3
1977	374.7	165.9	59.0	24.5	125.4	419.6	146.8	99.2	167.1	4.1	66.3	28.5	6.9	−44.8
1978	424.3	186.5	67.8	27.1	142.9	459.9	158.6	106.3	179.3	4.4	74.7	33.5	9.7	−35.6
1979	491.2	222.9	75.7	29.0	163.6	506.4	173.1	117.7	198.5	5.1	79.1	40.7	9.9	−15.2
1980	538.6	250.7	70.2	35.3	182.3	589.0	199.9	137.2	235.4	5.8	86.7	50.8	10.4	−50.4
1981	623.8	289.6	69.4	53.4	211.4	682.4	231.8	160.7	274.6	6.7	90.1	66.7	12.5	−58.5
1982	643.3	310.0	52.1	50.0	231.1	755.9	264.4	187.3	305.6	7.2	83.4	82.2	13.0	−112.6
1983	645.7	292.5	55.7	50.2	247.3	832.4	287.4	210.4	339.8	7.7	85.7	90.6	20.9	−186.7
1984	711.9	302.5	75.3	54.9	279.2	873.0	297.2	228.5	342.2	9.9	90.7	109.7	23.3	−161.0
1985	776.8	340.4	74.6	55.9	305.8	962.3	341.5	252.7	360.6	13.4	97.8	128.3	20.7	−185.5
1986	815.2	357.0	81.1	50.9	326.1	1,028.0	368.6	275.4	380.4	14.3	107.4	134.6	22.8	−212.8
1987	899.4	400.8	99.1	53.5	345.9	1,060.0	375.4	290.0	399.3	11.8	103.1	139.3	31.1	−160.7
1988	957.6	411.3	108.1	55.6	382.6	1,101.8	377.8	296.3	420.5	12.8	108.3	148.8	33.6	−144.1
1989	1,041.9	457.6	113.8	57.8	412.6	1,172.2	399.0	301.3	448.5	13.5	115.8	167.7	27.7	−130.3
1990	1,094.9	483.0	113.6	58.8	439.6	1,253.2	416.1	309.1	488.2	16.5	128.3	182.1	22.0	−158.2
1991 [3]	1,148.4	503.2	113.4	70.4	461.5	1,352.1	449.9	327.6	535.0	1.4	148.1	199.1	18.6	−203.6
1992 [3]	1,237.2	543.7	120.0	74.8	498.6	1,419.0	438.9	308.3	573.5	17.4	160.2	209.3	19.7	−181.8
Calendar:														
1969	199.7	95.1	36.1	18.9	49.6	191.3	100.0	78.9	50.8	2.2	20.3	12.7	5.2	8.4
1970	195.4	92.6	30.6	19.2	52.9	207.8	98.8	76.8	61.6	2.3	24.4	14.1	6.5	−12.4
1971	202.7	90.3	33.5	20.3	58.7	224.8	99.8	74.1	73.0	2.7	29.0	13.8	6.3	−22.0
1972	232.2	108.2	36.6	19.9	67.5	249.0	105.8	77.4	80.9	2.9	37.5	14.4	7.9	−16.8
1973	263.7	114.7	43.3	21.1	84.6	269.3	106.4	77.5	93.7	2.9	40.6	18.0	7.8	−5.6
1974	293.9	131.3	45.1	21.6	95.9	305.5	116.2	82.6	115.0	3.6	43.9	20.7	5.6	−11.6
1975	294.9	125.9	43.6	23.8	101.6	364.2	129.2	89.6	146.8	4.0	54.6	23.0	6.9	−69.4
1976	340.1	147.3	54.6	23.3	115.0	393.7	136.3	93.4	159.3	4.4	61.1	26.8	5.8	−53.5
1977	384.1	169.8	61.6	25.0	127.7	430.1	151.1	100.9	170.1	4.2	67.5	29.1	8.2	−46.0
1978	441.4	194.9	71.4	28.0	147.0	470.7	161.8	108.9	182.4	4.7	77.3	35.2	9.5	−29.3
1979	505.0	231.0	74.4	29.3	170.3	521.1	178.0	121.9	205.6	5.2	80.5	42.5	9.2	−16.1
1980	553.8	257.9	70.3	38.8	186.8	615.1	208.1	142.7	247.0	6.5	88.7	53.3	11.5	−61.3
1981	639.5	298.9	65.7	56.2	218.8	703.3	242.2	167.5	282.1	6.5	87.9	72.4	12.3	−63.8
1982	635.3	304.5	49.0	48.1	233.7	781.2	272.7	193.8	316.3	7.8	83.9	84.6	16.0	−145.9
1983	659.9	294.5	61.3	51.6	252.5	835.9	283.5	214.4	340.1	8.5	86.2	94.3	22.9	−176.0
1984	726.0	310.3	75.2	55.7	284.7	895.6	310.5	234.3	344.2	10.7	93.6	115.6	21.2	−169.6
1985	788.7	346.4	76.3	55.1	310.9	985.6	355.2	259.1	366.7	13.4	99.7	130.1	20.3	−196.9
1986	827.9	361.4	83.8	50.5	332.1	1,034.8	366.5	277.8	386.0	13.9	106.8	135.6	26.0	−206.9
1987	913.8	405.8	103.2	54.0	350.8	1,071.9	381.3	294.6	401.6	12.4	102.6	142.3	31.8	−158.2
1988	972.4	415.1	110.5	57.0	389.8	1,114.2	380.3	297.2	425.7	13.1	111.1	151.3	32.7	−141.7
1989	1,052.9	464.0	110.4	58.4	420.1	1,187.2	400.0	301.1	458.6	13.4	118.2	172.0	25.0	−134.3
1990 ^{p}	1,111.7	493.2	110.1	61.7	446.7	1,273.0	424.2	314.0	496.6	12.5	130.6	186.3	22.8	−161.3
1982: IV	633.1	303.0	46.4	47.6	236.1	835.7	293.2	205.4	337.9	9.5	84.5	87.2	23.4	−202.6
1983: IV	675.5	291.9	70.2	53.6	259.8	844.7	276.1	221.5	340.3	12.2	86.0	101.0	29.1	−169.2
1984: IV	742.7	326.0	69.7	56.2	290.7	930.2	326.0	244.1	346.6	15.5	96.3	125.3	21.0	−187.5
1985: IV	805.3	355.3	78.8	53.5	317.7	1,017.5	376.6	268.6	370.3	15.5	103.5	132.7	19.0	−212.2
1986: IV	853.8	376.2	88.9	50.8	337.9	1,042.8	368.8	280.7	391.3	14.5	103.0	136.0	29.2	−189.0
1987: IV	940.0	419.2	107.4	55.1	358.4	1,101.7	388.2	296.0	404.6	16.8	102.7	147.6	41.5	−161.7
1988: I	943.0	402.4	104.0	56.2	380.4	1,096.7	374.8	296.6	422.7	11.7	109.2	143.9	34.5	−153.7
II	972.5	418.8	110.8	56.3	386.6	1,109.4	377.7	297.1	424.5	10.5	111.6	149.4	35.7	−136.9
III	976.7	414.4	111.9	57.6	392.8	1,096.8	367.4	295.5	426.7	12.3	111.2	153.9	25.3	−120.1
IV	997.5	424.8	115.4	57.8	399.6	1,153.8	401.1	299.6	429.1	18.1	112.2	157.9	35.3	−156.3
1989: I	1,045.4	453.1	120.7	57.6	413.9	1,178.0	398.3	298.2	448.1	12.6	116.7	167.4	35.0	−132.6
II	1,062.2	470.9	115.0	58.0	418.4	1,184.9	402.5	300.6	454.2	10.5	117.0	173.4	27.3	−122.7
III	1,048.1	462.2	104.7	59.3	421.9	1,179.8	399.2	306.3	461.5	13.0	117.6	172.1	16.5	−131.7
IV	1,055.7	469.6	101.3	58.7	426.1	1,205.8	399.9	299.2	470.5	17.3	121.5	175.2	21.3	−150.1
1990: I	1,080.6	473.6	106.5	60.6	439.9	1,248.8	410.6	307.2	490.3	13.1	128.5	178.1	28.3	−168.3
II	1,105.8	492.1	109.2	60.5	444.0	1,271.7	421.9	309.6	491.4	18.9	131.5	184.3	23.8	−166.0
III	1,125.9	500.0	114.2	61.0	450.6	1,271.6	425.8	312.6	496.1	17.0	129.8	189.8	13.1	−145.7
IV ^{p}	....	507.1	....	64.9	452.2	1,300.0	438.5	326.5	508.7	1.0	132.6	193.1	26.1	....

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[1] Includes an item for the difference between wage accruals and disbursements, not shown separately.

[2] Through fiscal year 1976, the fiscal year was on a July 1–June 30 basis; beginning October 1976 (fiscal year 1977), the fiscal year is on an October 1–September 30 basis. The 3-month period from July 1, 1976 through September 30, 1976 is a separate fiscal period known as the transition quarter.

[3] Estimates.

Sources: Department of Commerce (Bureau of Economic Analysis) and Office of Management and Budget.

TABLE B–82.—*State and local government receipts and expenditures, national income and product accounts, 1946–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Receipts						Expenditures					Surplus or deficit (−), national income and product accounts
	Total	Personal tax and nontax receipts	Corporate profits tax accruals	Indirect business tax and nontax accruals	Contributions for social insurance	Federal grants-in-aid	Total [1]	Purchases of goods and services	Transfer payments to persons	Net interest paid less dividends received	Subsidies less current surplus of government enterprises	
1946	13.0	1.5	0.5	9.3	0.6	1.1	11.1	9.9	1.7	0.2	−0.7	1.9
1947	15.4	1.7	.6	10.7	.7	1.7	14.4	12.8	2.3	.1	−.8	1.0
1948	17.7	2.1	.7	12.2	.8	2.0	17.6	15.3	3.0	.1	−.8	.1
1949	19.5	2.4	.6	13.3	.9	2.2	20.2	18.0	3.0	.1	−.9	−.7
1950	21.3	2.5	.8	14.6	1.1	2.3	22.5	19.8	3.6	.1	−.9	−1.2
1951	23.4	2.8	.9	15.9	1.4	2.5	23.9	21.8	3.1	.0	−1.0	−.4
1952	25.4	3.0	.8	17.4	1.6	2.6	25.5	23.1	3.5	.0	−1.1	.0
1953	27.4	3.2	.8	18.8	1.7	2.8	27.3	24.8	3.6	.0	−1.2	.1
1954	29.0	3.5	.8	19.9	2.0	2.9	30.2	27.7	3.8	.1	−1.3	−1.1
1955	31.7	3.9	1.0	21.6	2.1	3.1	32.9	30.3	4.0	.1	−1.5	−1.3
1956	35.0	4.5	1.0	23.8	2.3	3.3	35.9	33.3	4.2	.1	−1.6	−.9
1957	38.5	5.0	1.0	25.7	2.6	4.2	39.8	36.9	4.6	.1	−1.7	−1.4
1958	42.0	5.4	1.0	27.2	2.8	5.6	44.4	40.8	5.1	.1	−1.7	−2.4
1959	46.6	6.2	1.2	29.3	3.1	6.8	47.0	43.3	5.6	.1	−2.0	−.4
1960	50.0	6.8	1.2	32.0	3.4	6.5	49.9	46.1	5.9	.1	−2.2	.1
1961	54.1	7.5	1.3	34.4	3.7	7.2	54.5	50.2	6.5	.1	−2.3	−.4
1962	58.6	8.4	1.5	37.0	3.9	8.0	58.2	53.5	7.0	.2	−2.5	.5
1963	63.4	9.0	1.7	39.4	4.2	9.1	62.9	58.1	7.5	.1	−2.8	.5
1964	69.8	10.2	1.8	42.6	4.7	10.4	68.8	63.5	8.2	−.1	−2.8	1.0
1965	75.5	11.3	2.0	46.1	5.0	11.1	75.5	69.9	8.8	−.3	−3.0	.0
1966	85.2	13.2	2.2	49.7	5.7	14.4	84.7	78.2	10.1	−.6	−3.0	.5
1967	94.1	15.0	2.6	53.9	6.7	15.9	95.2	87.0	12.1	−.9	−3.1	−1.1
1968	107.9	18.0	3.3	60.8	7.2	18.6	107.8	97.6	14.5	−1.1	−3.2	.1
1969	120.8	21.1	3.6	67.4	8.3	20.3	119.3	107.2	16.7	−1.3	−3.3	1.5
1970	135.8	23.6	3.7	74.8	9.2	24.4	134.0	119.4	20.1	−2.0	−3.6	1.8
1971	153.6	27.0	4.3	83.1	10.2	29.0	151.0	132.5	24.0	−1.6	−3.7	2.6
1972	179.3	33.8	5.3	91.2	11.5	37.5	165.8	144.2	27.5	−1.8	−4.2	13.5
1973	196.4	37.3	6.0	99.6	13.0	40.6	182.9	160.1	30.4	−3.3	−4.3	13.5
1974	213.1	40.5	6.7	107.4	14.6	43.9	205.9	182.9	32.3	−5.0	−4.4	7.2
1975	239.6	44.7	7.3	116.2	16.8	54.6	235.2	205.9	38.9	−5.1	−4.5	4.5
1976	270.1	51.5	9.6	128.4	19.5	61.1	254.9	220.6	43.6	−4.5	−4.8	15.2
1977	300.1	58.3	11.4	140.7	22.1	67.5	273.2	236.2	47.4	−5.3	−5.1	26.9
1978	330.3	66.2	12.1	150.0	24.7	77.3	301.3	263.4	52.4	−8.7	−5.6	28.9
1979	355.3	73.7	13.6	160.1	27.4	80.5	327.7	289.9	57.2	−13.8	−5.7	27.6
1980	390.0	82.6	14.5	174.5	29.7	88.7	363.2	322.2	65.7	−18.9	−5.8	26.8
1981	425.6	94.5	15.4	195.3	32.5	87.9	391.4	345.9	73.6	−22.4	−5.6	34.1
1982	449.4	104.9	14.0	210.8	35.8	83.9	414.3	369.0	79.9	−27.4	−7.3	35.1
1983	487.7	116.1	15.9	231.0	38.5	86.2	440.2	391.5	86.5	−29.0	−8.8	47.5
1984	540.5	129.8	18.7	258.2	40.2	93.6	475.9	425.3	93.7	−31.9	−11.3	64.6
1985	581.8	140.2	20.2	278.5	43.2	99.7	516.7	465.6	101.1	−37.0	−13.1	65.1
1986	626.3	151.5	22.5	298.5	47.1	106.8	563.5	505.7	110.9	−39.9	−13.2	62.8
1987	655.2	165.8	23.7	313.8	49.3	102.6	604.1	540.2	119.7	−41.3	−14.4	51.0
1988	697.6	176.5	25.7	331.7	52.7	111.1	651.1	582.3	131.6	−46.3	−16.5	46.5
1989	749.9	194.8	24.7	355.6	56.7	118.2	703.5	625.6	145.9	−49.3	−18.8	46.4
1990 [p]	800.1	206.6	24.0	378.7	60.2	130.6	764.7	673.8	162.9	−51.7	−20.3	35.4
1982: IV	459.8	108.1	13.4	216.9	36.9	84.5	424.1	378.7	82.3	−28.9	−8.0	35.8
1983: IV	505.8	122.0	17.9	240.5	39.4	86.0	449.5	400.0	88.7	−29.7	−9.4	56.4
1984: IV	554.5	133.6	17.3	266.5	40.7	96.3	489.1	438.5	96.4	−33.2	−12.6	65.4
1985: IV	598.0	144.3	21.0	284.8	44.4	103.5	531.8	480.1	104.2	−38.8	−13.7	66.3
1986: IV	637.6	158.2	24.2	302.3	49.8	103.0	579.8	520.1	114.4	−41.1	−13.6	57.8
1987: IV	667.3	169.4	24.7	320.2	50.3	102.7	620.3	553.9	123.1	−41.9	−14.8	46.9
1988: I	678.9	170.3	24.1	324.0	51.2	109.2	633.4	566.1	126.5	−43.5	−15.7	45.5
II	693.9	175.2	25.9	328.9	52.2	111.6	645.6	577.7	129.9	−45.8	−16.2	48.3
III	702.2	177.8	26.0	334.0	53.2	111.2	655.4	586.4	133.2	−47.7	−16.5	46.8
IV	715.5	182.6	26.7	339.8	54.2	112.2	670.2	598.9	137.0	−48.2	−17.4	45.2
1989: I	732.6	187.3	27.6	345.8	55.2	116.7	683.7	610.2	140.1	−48.5	−18.0	48.9
II	746.7	194.6	25.8	353.1	56.2	117.0	696.5	620.2	143.9	−48.9	−18.8	50.3
III	755.7	197.2	23.1	360.6	57.1	117.6	707.6	628.6	147.7	−49.6	−19.1	48.1
IV	764.6	200.0	22.1	362.8	58.1	121.5	726.1	643.4	152.0	−50.2	−19.2	38.5
1990: I	783.6	201.5	23.3	371.2	59.0	128.5	745.5	659.6	156.5	−50.7	−19.8	38.1
II	792.2	204.4	23.9	372.5	59.9	131.5	753.6	664.6	160.6	−51.4	−20.1	38.6
III	808.6	209.4	24.9	383.9	60.7	129.8	769.4	677.0	164.9	−52.0	−20.6	39.3
IV [p]	....	211.1	....	387.0	61.4	132.6	790.3	694.2	169.6	−52.7	−20.8	....

[1] Includes an item for the difference between wage accruals and disbursements, not shown separately.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-83.—*State and local government revenues and expenditures, selected fiscal years, 1927–89*

[Millions of dollars]

Fiscal year [1]	General revenues by source [2]							General expenditures by function [2]				
	Total	Property taxes	Sales and gross receipts taxes	Individual income taxes	Corporation net income taxes	Revenue from Federal Government	All other [3]	Total	Education	Highways	Public welfare	All other [4]
1927	7,271	4,730	470	70	92	116	1,793	7,210	2,235	1,809	151	3,015
1932	7,267	4,487	752	74	79	232	1,643	7,765	2,311	1,741	444	3,269
1934	7,678	4,076	1,008	80	49	1,016	1,449	7,181	1,831	1,509	889	2,952
1936	8,395	4,093	1,484	153	113	948	1,604	7,644	2,177	1,425	827	3,215
1938	9,228	4,440	1,794	218	165	800	1,811	8,757	2,491	1,650	1,069	3,547
1940	9,609	4,430	1,982	224	156	945	1,872	9,229	2,638	1,573	1,156	3,862
1942	10,418	4,537	2,351	276	272	858	2,123	9,190	2,586	1,490	1,225	3,889
1944	10,908	4,604	2,289	342	451	954	2,269	8,863	2,793	1,200	1,133	3,737
1946	12,356	4,986	2,986	422	447	855	2,661	11,028	3,356	1,672	1,409	4,591
1948	17,250	6,126	4,442	543	592	1,861	3,685	17,684	5,379	3,036	2,099	7,170
1950	20,911	7,349	5,154	788	593	2,486	4,541	22,787	7,177	3,803	2,940	8,867
1952	25,181	8,652	6,357	998	846	2,566	5,763	26,098	8,318	4,650	2,788	10,342
1953	27,307	9,375	6,927	1,065	817	2,870	6,252	27,910	9,390	4,987	2,914	10,619
1954	29,012	9,967	7,276	1,127	778	2,966	6,897	30,701	10,557	5,527	3,060	11,557
1955	31,073	10,735	7,643	1,237	744	3,131	7,584	33,724	11,907	6,452	3,168	12,197
1956	34,667	11,749	8,691	1,538	890	3,335	8,465	36,711	13,220	6,953	3,139	13,399
1957	38,164	12,864	9,467	1,754	984	3,843	9,252	40,375	14,134	7,816	3,485	14,940
1958	41,219	14,047	9,829	1,759	1,018	4,865	9,699	44,851	15,919	8,567	3,818	16,547
1959	45,306	14,983	10,437	1,994	1,001	6,377	10,516	48,887	17,283	9,592	4,136	17,876
1960	50,505	16,405	11,849	2,463	1,180	6,974	11,634	51,876	18,719	9,428	4,404	19,325
1961	54,037	18,002	12,463	2,613	1,266	7,131	12,563	56,201	20,574	9,844	4,720	21,063
1962	58,252	19,054	13,494	3,037	1,308	7,871	13,489	60,206	22,216	10,357	5,084	22,549
1963	62,890	20,089	14,456	3,269	1,505	8,722	14,850	64,816	23,776	11,136	5,481	24,423
1962–63	62,269	19,833	14,446	3,267	1,505	8,663	14,556	63,977	23,729	11,150	5,420	23,678
1963–64	68,443	21,241	15,762	3,791	1,695	10,002	15,951	69,302	26,286	11,664	5,766	25,586
1964–65	74,000	22,583	17,118	4,090	1,929	11,029	17,250	74,678	28,563	12,221	6,315	27,579
1965–66	83,036	24,670	19,085	4,760	2,038	13,214	19,269	82,843	33,287	12,770	6,757	30,029
1966–67	91,197	26,047	20,530	5,825	2,227	15,370	21,197	93,350	37,919	13,932	8,218	33,281
1967–68	101,264	27,747	22,911	7,308	2,518	17,181	23,598	102,411	41,158	14,481	9,857	36,915
1968–69	114,550	30,673	26,519	8,908	3,180	19,153	26,118	116,728	47,238	15,417	12,110	41,963
1969–70	130,756	34,054	30,322	10,812	3,738	21,857	29,971	131,332	52,718	16,427	14,679	47,508
1970–71	144,927	37,852	33,233	11,900	3,424	26,146	32,374	150,674	59,413	18,095	18,226	54,940
1971–72	167,541	42,877	37,518	15,227	4,416	31,342	36,162	168,549	65,814	19,021	21,117	62,597
1972–73	190,222	45,283	42,047	17,994	5,425	39,264	40,210	181,357	69,714	18,615	23,582	69,446
1973–74	207,670	47,705	46,098	19,491	6,015	41,820	46,541	198,959	75,833	19,946	25,085	78,096
1974–75	228,171	51,491	49,815	21,454	6,642	47,034	51,735	230,721	87,858	22,528	28,155	92,180
1975–76	256,176	57,001	54,547	24,575	7,273	55,589	57,191	256,731	97,216	23,907	32,604	103,004
1976–77	285,157	62,527	60,641	29,246	9,174	62,444	61,124	274,215	102,780	23,058	35,906	112,472
1977–78	315,960	66,422	67,596	33,176	10,738	69,592	68,436	296,984	110,758	24,609	39,140	122,477
1978–79	343,279	64,944	74,247	36,932	12,128	75,164	79,864	327,517	119,448	28,440	41,898	137,731
1979–80	382,322	68,499	79,927	42,080	13,321	83,029	95,466	369,086	133,211	33,311	47,288	155,277
1980–81	423,404	74,969	85,971	46,426	14,143	90,294	111,599	407,449	145,784	34,603	54,105	172,957
1981–82	457,654	82,067	93,613	50,738	15,028	87,282	128,926	436,733	154,282	34,520	57,996	189,935
1982–83	486,753	89,105	100,247	55,129	14,258	90,007	138,008	466,516	163,876	36,655	60,906	205,079
1983–84	542,730	96,457	114,097	64,529	17,141	96,935	153,570	505,008	176,108	39,419	66,414	223,068
1984–85	598,121	103,757	126,376	70,361	19,152	106,158	172,317	553,899	192,686	44,989	71,479	244,745
1985–86	641,486	111,709	135,005	74,365	19,994	113,099	187,314	605,623	210,819	49,368	75,868	269,568
1986–87	686,860	121,203	144,091	83,935	22,425	114,857	200,350	657,134	226,619	52,355	82,650	295,510
1987–88	726,762	132,212	156,452	88,350	23,663	117,602	208,482	704,921	242,683	55,621	89,090	317,528
1988–89	785,844	142,525	166,016	97,807	25,922	125,824	227,751	762,311	263,898	58,093	97,879	342,441

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[1] Fiscal years not the same for all governments. See Note.

[2] Excludes revenues or expenditures of publicly owned utilities and liquor stores, and of insurance-trust activities. Intergovernmental receipts and payments between State and local governments are also excluded.

[3] Includes other taxes and charges and miscellaneous revenues.

[4] Includes expenditures for libraries, hospitals, health, employment security administration, veterans' services, air transportation, water transport and terminals, parking facilities, and transit subsidies, police protection, fire protection, correction, protective inspection and regulation, sewerage, natural resources, parks and recreation, housing and community development, solid waste management, financial administration, judicial and legal, general public buildings, other governmental administration, interest on general debt, and general expenditures, n.e.c.

Note.—Data for fiscal years listed from 1962–63 to 1988–89 are the aggregations of data for government fiscal years that ended in the 12-month period from July 1 to June 30 of those years. Data for 1963 and earlier years include data for government fiscal years ending during that particular calendar year.

Data are not available for intervening years.

Source: Department of Commerce, Bureau of the Census.

TABLE B–84.—*Interest-bearing public debt securities by kind of obligation, 1967–90*

[Millions of dollars]

End of year or month	Total interest-bearing public debt securities [1]	Marketable				Nonmarketable				
		Total [1]	Treasury bills	Treasury notes	Treasury bonds	Total	U.S. savings bonds	Foreign government and public series [2]	Government account series	Other [3]
Fiscal year:										
1967	322,286	[4] 210,672	58,535	49,108	97,418	111,614	51,213	1,514	56,155	2,731
1968	344,401	226,592	64,440	71,073	91,079	117,808	51,712	3,741	59,526	2,828
1969	351,729	226,107	68,356	78,946	78,805	125,623	51,711	4,070	66,790	3,051
1970	369,026	232,599	76,154	93,489	62,956	136,426	51,281	4,755	76,323	4,068
1971	396,289	245,473	86,677	104,807	53,989	150,816	53,003	9,270	82,784	5,759
1972	425,360	257,202	94,648	113,419	49,135	168,158	55,921	18,985	89,598	3,654
1973	456,353	262,971	100,061	117,840	45,071	193,382	59,418	28,524	101,738	3,701
1974	473,238	266,575	105,019	128,419	33,137	206,663	61,921	25,011	115,442	4,289
1975	532,122	315,606	128,569	150,257	36,779	216,516	65,482	23,216	124,173	3,644
1976	619,254	392,581	161,198	191,758	39,626	226,673	69,733	21,500	130,557	4,883
1977	697,629	443,508	156,091	241,692	45,724	254,121	75,411	21,799	140,113	16,797
1978	766,971	485,155	160,936	267,865	56,355	281,816	79,798	21,680	153,271	27,067
1979	819,007	506,693	161,378	274,242	71,073	312,314	80,440	28,115	176,360	27,400
1980	906,402	594,506	199,832	310,903	83,772	311,896	72,727	25,158	189,848	24,164
1981	996,495	683,209	223,388	363,643	96,178	313,286	68,017	20,499	201,052	23,718
1982	1,140,883	824,422	277,900	442,890	103,631	316,461	67,274	14,641	210,462	24,085
1983	1,375,751	1,024,000	340,733	557,525	125,742	351,751	70,024	11,450	234,684	35,593
1984	1,559,570	1,176,556	356,798	661,687	158,070	383,015	72,832	8,806	259,534	41,843
1985	1,821,010	1,360,179	384,220	776,449	199,510	460,831	77,011	6,638	313,928	63,255
1986	2,122,684	[1] 1,564,329	410,730	896,884	241,716	558,355	85,551	4,128	365,872	102,804
1987	2,347,750	[1] 1,675,980	378,263	1,005,127	277,590	671,769	97,004	4,350	440,658	129,758
1988	2,599,877	[1] 1,802,905	398,451	1,089,578	299,875	796,972	106,176	6,320	536,455	148,023
1989	2,836,309	[1] 1,892,763	406,597	1,133,193	337,974	943,546	114,025	6,818	663,677	159,025
1990	3,210,943	[1] 2,092,759	482,454	1,218,081	377,224	1,118,184	122,152	36,041	779,412	180,581
1989: Jan	2,695,333	[1] 1,846,222	416,263	1,106,254	308,860	849,111	108,694	6,889	582,245	151,283
Feb	2,720,246	[1] 1,859,948	416,170	1,110,476	318,457	860,299	109,504	6,818	590,025	153,952
Mar	2,738,291	[1] 1,871,730	417,020	1,121,422	318,443	866,561	110,364	6,666	594,662	154,868
Apr	2,742,447	[1] 1,858,091	410,513	1,114,299	318,435	884,357	110,931	6,516	611,624	155,286
May	2,775,002	[1] 1,878,407	406,482	1,129,025	328,055	896,596	111,630	6,236	622,746	155,984
June	2,797,407	[1] 1,877,295	397,069	1,137,180	328,046	920,112	112,284	6,152	645,236	156,440
July	2,798,019	[1] 1,873,160	391,454	1,138,664	328,042	924,859	112,676	6,207	649,841	156,135
Aug	2,834,002	[1] 1,905,187	409,287	1,142,915	337,985	928,815	113,349	6,112	650,585	158,769
Sept	2,836,309	[1] 1,892,763	406,597	1,133,193	337,974	943,546	114,025	6,818	663,677	159,025
Oct	2,898,834	[1] 1,939,579	428,022	1,158,590	337,967	959,254	114,561	6,765	671,540	166,389
Nov	2,921,176	[1] 1,958,274	433,718	1,161,337	348,219	962,902	115,316	6,547	673,261	167,778
Dec	2,931,786	[1] 1,945,409	430,648	1,151,548	348,213	986,377	115,692	6,786	695,649	168,250
1990: Jan	2,971,841	[1] 1,974,637	435,337	1,176,097	348,203	997,204	116,169	6,997	701,834	172,205
Feb	2,991,017	[1] 1,990,999	437,755	1,180,381	357,862	1,000,019	116,265	6,398	704,621	172,735
Mar	3,029,537	[1] 1,995,299	453,077	1,169,364	357,858	1,034,238	117,979	37,062	705,145	174,052
Apr	3,058,404	[1] 2,001,494	433,089	1,195,550	357,855	1,056,910	118,645	37,102	722,887	178,275
May	3,092,558	[1] 2,024,738	439,922	1,203,012	365,804	1,067,820	119,455	36,814	733,612	177,938
June	3,121,498	[1] 2,028,041	453,505	1,192,739	366,797	1,093,457	120,058	36,382	758,697	178,321
July	3,166,272	[1] 2,068,322	464,851	1,221,694	366,776	1,097,950	120,760	36,284	759,702	181,203
Aug	3,209,186	[1] 2,114,041	493,789	1,228,021	377,230	1,095,146	121,371	36,046	756,055	181,672
Sept	3,210,943	[1] 2,092,759	482,454	1,218,081	377,224	1,118,184	122,152	36,041	779,412	180,581
Oct	3,272,492	[1] 2,139,486	500,649	1,246,618	377,220	1,133,006	122,828	35,845	789,922	184,411
Nov	3,328,193	[1] 2,183,585	528,765	1,251,647	388,174	1,144,608	123,630	37,143	799,190	184,644
Dec	3,362,026	[1] 2,195,800	527,415	1,265,215	388,170	1,166,226	124,118	43,455	813,842	184,811

[1] Includes Federal Financing Bank securities, not shown separately, in millions of dollars: 15,000 in September 1986–September 1987; 14,845 in October 1987–May 1988; 15,000 in June–September 1988; 14,845 in October 1988–May 1989; 15,000 in June–December 1989; and 15,000 in January–December 1990.

[2] Nonmarketable certificates of indebtedness, notes, bonds, and bills in the Treasury foreign series of dollar-denominated and foreign-currency denominated issues.

[3] Includes depository bonds, retirement plan bonds, Rural Electrification Administration bonds, State and local bonds, and special issues held only by U.S. Government agencies and trust funds and the Federal home loan banks.

[4] Includes $5,610 million in certificates not shown separately.

Note.—Through fiscal year 1976, the fiscal year was on a July 1–June 30 basis; beginning October 1976 (fiscal year 1977), the fiscal year is on an October 1–September 30 basis.

Source: Department of the Treasury.

TABLE B-85.—*Maturity distribution and average length of marketable interest-bearing public debt securities held by private investors, 1967–90*

End of year or month	Amount outstanding, privately held	Maturity class					Average length	
		Within 1 year	1 to 5 years	5 to 10 years	10 to 20 years	20 years and over		
	Millions of dollars						Years	Months
Fiscal year:								
1967	150,321	56,561	53,584	21,057	6,153	12,968	5	1
1968	159,671	66,746	52,295	21,850	6,110	12,670	4	5
1969	156,008	69,311	50,182	18,078	6,097	12,337	4	2
1970	157,910	76,443	57,035	8,286	7,876	8,272	3	8
1971	161,863	74,803	58,557	14,503	6,357	7,645	3	6
1972	165,978	79,509	57,157	16,033	6,358	6,922	3	3
1973	167,869	84,041	54,139	16,385	8,741	4,564	3	1
1974	164,862	87,150	50,103	14,197	9,930	3,481	2	11
1975	210,382	115,677	65,852	15,385	8,857	4,611	2	8
1976	279,782	151,723	89,151	24,169	8,087	6,652	2	7
1977	326,674	161,329	113,319	33,067	8,428	10,531	2	11
1978	356,501	163,819	132,993	33,500	11,383	14,805	3	3
1979	380,530	181,883	127,574	32,279	18,489	20,304	3	7
1980	463,717	220,084	156,244	38,809	25,901	22,679	3	9
1981	549,863	256,187	182,237	48,743	32,569	30,127	4	0
1982	682,043	314,436	221,783	75,749	33,017	37,058	3	11
1983	862,631	379,579	294,955	99,174	40,826	48,097	4	1
1984	1,017,488	437,941	332,808	130,417	49,664	66,658	4	6
1985	1,185,675	472,661	402,766	159,383	62,853	88,012	4	11
1986	1,354,275	506,903	467,348	189,995	70,664	119,365	5	3
1987	1,445,366	483,582	526,746	209,160	72,862	153,016	5	9
1988	1,555,208	524,201	552,993	232,453	74,186	171,375	5	9
1989	1,654,660	546,751	578,333	247,428	80,616	201,532	6	0
1990	1,841,903	626,297	630,144	267,573	82,713	235,176	6	1
1989: Jan	1,594,936	538,115	571,029	231,204	77,820	176,768	5	9
Feb	1,612,096	543,397	574,598	230,003	77,820	186,278	5	11
Mar	1,624,734	545,238	576,867	238,531	77,820	186,278	5	10
Apr	1,596,007	533,604	563,966	235,318	77,540	185,579	5	10
May	1,636,513	541,600	586,581	235,937	80,616	191,779	6	0
June	1,627,010	523,893	586,945	243,777	80,616	191,779	6	0
July	1,635,962	530,571	588,828	244,168	80,616	191,779	5	11
Aug	1,669,257	552,478	595,471	239,160	80,616	201,532	6	0
Sept	1,654,660	546,751	578,333	247,428	80,616	201,532	6	0
Oct	1,702,889	572,032	600,397	248,311	80,617	201,532	5	10
Nov	1,716,630	576,994	604,131	243,296	83,791	208,418	6	0
Dec	1,700,367	571,619	585,902	251,333	83,749	207,764	6	0
1990: Jan	1,737,737	585,754	607,706	252,068	83,792	208,417	5	11
Feb	1,753,579	587,028	617,778	248,620	83,423	216,730	6	1
Mar	1,760,337	605,415	598,143	256,703	83,402	216,674	6	0
Apr	1,758,737	580,464	620,335	257,785	83,423	216,730	6	0
May	1,778,984	586,720	631,287	250,813	85,246	224,918	6	2
June	1,780,188	596,897	613,441	259,688	85,246	224,916	6	1
July	1,817,691	607,047	639,408	261,075	85,246	224,916	6	0
Aug	1,859,288	636,667	647,175	258,038	82,587	234,821	6	0
Sept	1,841,903	626,297	630,144	267,573	82,713	235,176	6	1
Oct	1,880,412	639,338	653,904	269,281	82,713	235,176	5	11
Nov	1,920,292	663,157	666,527	262,195	86,476	241,937	6	0
Dec	1,925,391	666,891	660,908	270,082	86,105	241,405	5	11

Note.—All issues classified to final maturity.

Through fiscal year 1976, the fiscal year was on a July 1–June 30 basis; beginning October 1976 (fiscal year 1977), the fiscal year is on an October 1–September 30 basis.

Source: Department of the Treasury.

TABLE B-86.—*Estimated ownership of public debt securities by private investors, 1976–90*

[Par values; [1] billions of dollars]

End of month	Held by private investors											
	Total	Commercial banks [2]	Nonbank investors									
			Total	Individuals [3]			Insurance companies	Money market funds	Corporations [5]	State and local governments [6]	Foreign and international [7]	Other investors [8]
				Total	Savings bonds [4]	Other securities						
1976:												
June	376.4	91.4	285.0	96.1	69.6	26.5	14.4	0.8	23.3	34.2	69.8	46.4
Dec	409.5	103.5	306.0	101.6	72.0	29.6	16.2	1.1	23.5	40.9	78.1	44.6
1977:												
June	421.0	102.7	318.3	104.9	74.4	30.5	18.1	.8	22.1	50.3	87.9	34.2
Dec	461.3	98.9	362.4	107.8	76.7	31.1	19.9	.9	18.2	58.1	109.6	47.9
1978:												
June	477.8	97.8	380.0	109.0	79.1	29.9	19.7	1.3	17.3	70.0	119.5	43.2
Dec	508.6	95.0	413.6	114.0	80.7	33.3	20.0	1.5	17.3	76.1	133.1	51.6
1979:												
June	516.6	86.1	430.5	115.5	80.6	34.9	20.9	3.8	18.6	78.7	114.9	78.1
Dec	540.5	88.1	452.4	118.0	79.9	38.1	21.4	5.6	17.0	81.7	119.0	89.7
1980:												
June	558.2	97.4	460.8	116.5	73.4	43.1	22.3	5.3	14.0	83.3	118.2	101.2
Dec	616.4	112.1	504.3	117.1	72.5	44.6	24.0	3.5	19.3	87.9	129.7	122.8
1981:												
June	651.2	119.7	531.5	107.4	69.2	38.2	26.4	9.0	19.9	94.2	136.6	138.0
Dec	694.5	111.4	583.1	110.8	68.1	42.7	29.0	21.5	17.9	96.8	136.6	170.5
1982:												
June	740.9	116.1	624.8	114.1	67.4	46.7	35.8	22.4	17.6	103.3	137.2	194.4
Dec	848.4	131.4	717.0	116.5	68.3	48.2	44.1	42.6	24.5	115.0	149.5	224.8
1983:												
June	948.6	171.6	777.0	121.3	69.7	51.6	54.0	28.3	32.8	127.4	160.1	253.1
Dec	1,022.6	188.8	833.8	133.4	71.5	61.9	65.3	22.8	39.7	149.0	166.3	257.3
1984:												
June	1,102.2	185.4	916.8	142.2	72.9	69.3	64.2	14.9	45.3	162.9	171.6	315.7
Dec	1,212.5	186.0	1,026.5	143.8	74.5	69.3	64.5	25.9	50.1	173.0	205.9	363.3
1985:												
Mar	1,254.1	197.8	1,056.3	145.1	75.4	69.7	66.5	26.7	50.8	177.0	199.6	390.6
June	1,292.0	201.6	1,090.4	148.7	76.7	72.0	69.1	24.8	54.9	190.3	213.8	388.8
Sept	1,338.2	203.6	1,134.6	151.4	78.2	73.2	71.4	22.7	59.0	203.0	222.9	404.2
Dec	1,417.2	198.2	1,219.0	154.8	79.8	75.0	78.5	25.1	59.0	226.7	224.8	450.1
1986:												
Mar	1,473.1	201.7	1,271.4	157.8	81.4	76.4	84.0	29.9	59.6	225.6	232.6	481.9
June	1,502.7	200.6	1,302.1	159.5	83.8	75.7	88.6	22.8	61.2	227.1	250.9	492.0
Sept	1,553.3	200.9	1,352.4	158.0	87.1	70.9	96.4	24.9	65.7	251.2	265.5	490.7
Dec	1,602.0	203.5	1,398.5	162.7	92.3	70.4	105.6	28.6	68.8	262.8	263.4	506.6
1987:												
Mar	1,641.4	199.9	1,441.5	163.0	94.7	68.3	107.8	18.8	73.5	264.6	272.8	541.0
June	1,658.1	199.4	1,458.7	165.6	96.8	68.8	104.0	20.6	79.7	268.7	281.1	539.0
Sept	1,680.7	205.2	1,475.5	167.7	98.5	69.2	104.6	15.5	81.8	273.0	279.5	553.4
Dec	1,731.4	201.5	1,529.9	172.4	101.1	71.3	104.9	14.6	84.6	284.6	299.7	569.1
1988:												
Mar	1,779.6	203.3	1,576.3	178.1	104.0	74.1	103.6	15.2	86.3	291.4	332.5	569.2
June	1,786.7	198.3	1,588.4	182.0	106.2	75.8	103.8	13.4	87.6	297.2	345.4	559.0
Sept	1,821.2	199.2	1,622.0	186.8	107.8	79.0	105.1	11.1	85.9	305.7	345.9	581.5
Dec	1,858.5	193.8	1,664.7	190.4	109.6	80.8	107.3	11.8	86.0	313.6	362.2	593.4
1989:												
Mar	1,903.4	200.7	1,702.7	204.2	112.2	92.0	120.4	13.0	89.4	326.0	376.6	573.1
June	1,909.1	186.6	1,722.5	211.7	114.0	97.7	121.7	11.3	91.0	332.0	369.1	585.7
Sept	1,958.3	174.8	1,783.5	213.5	115.7	97.8	124.1	12.9	90.9	338.0	394.9	609.2
Dec	2,015.8	174.8	1,841.0	216.5	117.7	98.8	130.1	14.9	93.4	338.7	392.9	654.5
1990:												
Mar	2,115.1	189.2	1,925.9	222.1	119.9	102.2	133.8	31.3	93.8	348.7	386.3	709.9
June	2,141.8	188.2	1,953.6	234.0	121.9	112.1	137.0	28.1	95.8	345.7	392.3	720.7
Sept	2,207.3	188.0	2,019.3	238.5	123.9	114.6	138.9	33.6	99.1	344.0	404.8	760.4

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[1] U.S. savings bonds, series A–F and J, are included at current redemption value.

[2] Includes domestically chartered banks, U.S. branches and agencies of foreign banks, New York investment companies majority owned by foreign banks, and Edge Act corporations owned by domestically chartered and foreign banks.

[3] Includes partnerships and personal trust accounts.

[4] Includes U.S. savings notes. Sales began May 1, 1967, and were discontinued June 30, 1970.

[5] Exclusive of banks and insurance companies.

[6] Includes State and local pension funds.

[7] Consists of the investment of foreign balances and international accounts in the United States.

[8] Includes savings and loan associations, credit unions, nonprofit institutions, mutual savings banks, corporate pension trust funds, dealers and brokers, certain Government deposit accounts, and Government-sponsored agencies.

Source: Department of the Treasury.

TABLE B–87.—*Corporate profits with inventory valuation and capital consumption adjustments, 1929–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Corporate profits with inventory valuation and capital consumption adjustments	Corporate profits tax liability	Corporate profits after tax with inventory valuation and capital consumption adjustments		
			Total	Dividends	Undistributed profits with inventory valuation and capital consumption adjustments
1929	9.6	1.4	8.2	5.8	2.4
1933	−1.5	.5	−2.1	2.0	−4.1
1939	5.5	1.4	4.0	3.8	.3
1940	8.8	2.8	5.9	4.0	1.9
1941	14.3	7.6	6.7	4.4	2.3
1942	19.7	11.4	8.3	4.3	4.0
1943	24.0	14.1	9.9	4.4	5.5
1944	24.2	12.9	11.2	4.6	6.6
1945	19.7	10.7	9.0	4.6	4.4
1946	17.2	9.1	8.0	5.6	2.5
1947	22.9	11.3	11.7	6.3	5.4
1948	30.3	12.4	17.8	7.0	10.8
1949	28.0	10.2	17.8	7.2	10.6
1950	34.9	17.9	17.0	8.8	8.2
1951	39.9	22.6	17.3	8.5	8.8
1952	37.5	19.4	18.1	8.5	9.6
1953	37.7	20.3	17.4	8.8	8.6
1954	36.6	17.6	19.0	9.1	9.8
1955	47.1	22.0	25.1	10.3	14.8
1956	45.7	22.0	23.8	11.1	12.7
1957	45.3	21.4	23.8	11.5	12.3
1958	40.3	19.0	21.4	11.3	10.1
1959	51.4	23.6	27.8	12.2	15.6
1960	49.5	22.7	26.8	12.9	13.9
1961	50.3	22.8	27.6	13.3	14.2
1962	58.3	24.0	34.3	14.4	19.9
1963	63.6	26.2	37.4	15.5	21.9
1964	70.7	28.0	42.7	17.3	25.3
1965	81.3	30.9	50.4	19.1	31.3
1966	86.6	33.7	52.9	19.4	33.5
1967	84.1	32.7	51.4	20.2	31.2
1968	90.7	39.4	51.4	22.0	29.4
1969	87.4	39.7	47.7	22.5	25.2
1970	74.7	34.4	40.3	22.5	17.9
1971	87.1	37.7	49.3	22.9	26.4
1972	100.7	41.9	58.8	24.4	34.4
1973	113.3	49.3	64.1	27.0	37.0
1974	101.7	51.8	49.9	29.7	20.2
1975	117.6	50.9	66.7	29.6	37.1
1976	145.2	64.2	81.0	34.6	46.4
1977	174.8	73.0	101.8	39.5	62.3
1978	197.2	83.5	113.7	44.7	69.0
1979	200.1	88.0	112.1	50.1	62.0
1980	177.2	84.8	92.4	54.7	37.7
1981	188.0	81.1	106.8	63.6	43.2
1982	150.0	63.1	86.9	66.9	20.0
1983	213.7	77.2	136.5	71.5	65.0
1984	266.9	93.9	173.0	79.0	94.0
1985	282.3	96.4	185.9	83.3	102.6
1986	282.1	106.3	175.8	91.3	84.5
1987	308.3	126.9	181.4	98.2	83.2
1988	337.6	136.2	201.4	110.0	91.4
1989	311.6	135.1	176.5	123.5	53.0
1990^p	297.1	134.1	163.0	133.9	29.1
1982: IV	146.1	59.8	86.3	68.5	17.9
1983: IV	248.5	88.1	160.4	73.9	86.5
1984: IV	266.9	87.0	179.9	80.8	99.1
1985: IV	291.4	99.8	191.5	84.0	107.6
1986: IV	275.2	113.1	162.1	93.6	68.5
1987: IV	323.1	132.1	191.0	102.2	88.8
1988: I	330.5	128.2	202.3	105.0	97.3
II	335.8	136.7	199.1	107.9	91.2
III	334.4	137.9	196.5	111.8	84.8
IV	349.6	142.1	207.5	115.3	92.2
1989: I	327.3	148.3	179.0	119.1	59.9
II	321.4	140.8	180.6	122.1	58.5
III	306.7	127.8	178.9	125.0	53.9
IV	290.9	123.5	167.5	127.7	39.8
1990: I	296.8	129.9	167.0	130.3	36.7
II	306.6	133.1	173.4	133.0	40.5
III	300.7	139.1	161.6	135.1	26.5
IV^p	....	....	....	137.2	....

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–88.—*Corporate profits by industry, 1929–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Corporate profits with inventory valuation adjustment and without capital consumption adjustment										
	Total	Domestic industries									Rest of the world
		Total	Financial[1]			Nonfinancial					
			Total	Federal Reserve banks	Other	Total	Manufacturing[2]	Transportation and public utilities	Wholesale and retail trade	Other	
1929	10.5	10.2	1.3	0.0	1.3	8.9	5.2	1.8	1.0	0.9	0.2
1933	−1.2	−1.2	.3	.0	.3	−1.5	−.4	.0	−.5	−.7	.0
1939	6.5	6.1	.8	.0	.8	5.3	3.3	1.0	.7	.3	.3
1940	9.8	9.6	1.0	.0	.9	8.6	5.5	1.3	1.2	.6	.3
1941	15.4	15.0	1.1	.0	1.0	14.0	9.5	2.0	1.4	1.1	.4
1942	20.5	20.1	1.2	.0	1.2	18.9	11.8	3.4	2.2	1.5	.4
1943	24.5	24.1	1.3	.0	1.3	22.8	13.8	4.4	3.0	1.6	.4
1944	24.0	23.5	1.6	.1	1.6	21.9	13.2	3.9	3.2	1.6	.4
1945	19.3	18.9	1.7	.1	1.6	17.3	9.7	2.7	3.3	1.5	.3
1946	19.6	18.9	2.1	.1	2.0	16.8	9.0	1.8	3.8	2.1	.7
1947	25.9	24.9	1.7	.1	1.6	23.2	13.6	2.2	4.6	2.9	1.0
1948	33.4	32.2	2.6	.2	2.3	29.6	17.6	3.0	5.5	3.6	1.3
1949	31.1	29.9	3.1	.2	2.9	26.8	16.2	3.0	4.5	3.1	1.1
1950	37.9	36.7	3.1	.2	3.0	33.5	20.9	4.0	5.0	3.6	1.3
1951	43.3	41.5	3.6	.3	3.3	37.9	24.6	4.6	5.0	3.7	1.7
1952	40.6	38.7	4.0	.4	3.7	34.7	21.7	4.9	4.8	3.3	1.9
1953	40.2	38.4	4.5	.4	4.1	33.9	22.0	5.0	3.8	3.1	1.8
1954	38.4	36.4	4.6	.3	4.3	31.8	19.9	4.7	3.8	3.4	2.0
1955	47.5	45.1	4.8	.3	4.5	40.3	26.0	5.6	5.0	3.6	2.4
1956	46.9	44.1	5.0	.5	4.5	39.1	24.7	5.9	4.5	4.1	2.8
1957	46.6	43.5	5.2	.6	4.6	38.3	24.0	5.8	4.4	4.0	3.1
1958	41.6	39.1	5.7	.6	5.1	33.5	19.4	5.9	4.6	3.6	2.5
1959	52.3	49.6	6.8	.7	6.0	42.9	26.4	7.0	5.9	3.6	2.7
1960	49.8	46.7	7.2	1.0	6.2	39.5	23.6	7.4	4.9	3.6	3.1
1961	50.1	46.8	7.0	.8	6.3	39.8	23.3	7.8	5.0	3.7	3.3
1962	55.2	51.5	7.3	.9	6.4	44.2	26.0	8.4	5.8	3.9	3.7
1963	59.8	55.8	6.8	1.0	5.8	49.0	29.3	9.3	5.9	4.4	4.0
1964	66.2	61.8	6.9	1.1	5.8	54.9	32.3	10.0	7.5	5.1	4.4
1965	76.2	71.5	7.5	1.4	6.2	64.0	39.3	11.0	8.1	5.6	4.6
1966	81.2	76.7	8.5	1.7	6.8	68.2	41.9	11.8	8.2	6.3	4.4
1967	78.6	73.9	9.0	2.0	7.0	64.9	38.6	10.7	9.1	6.5	4.7
1968	85.4	79.9	10.4	2.5	7.9	69.5	41.4	10.8	10.4	6.9	5.5
1969	81.4	74.8	11.2	3.1	8.1	63.7	36.7	10.3	10.5	6.1	6.5
1970	69.5	62.6	12.2	3.6	8.6	50.4	26.7	8.2	9.6	5.9	6.9
1971	82.7	75.1	14.1	3.3	10.7	61.0	34.3	8.5	11.7	6.5	7.6
1972	94.9	85.5	15.4	3.4	12.0	70.2	40.8	9.0	13.4	6.9	9.3
1973	107.1	92.6	15.8	4.5	11.2	76.8	46.2	8.5	13.9	8.2	14.5
1974	99.4	82.4	14.7	5.7	8.9	67.8	39.8	6.7	12.9	8.3	17.0
1975	123.9	109.5	11.2	5.7	5.5	98.3	53.6	10.3	22.2	12.2	14.4
1976	155.3	139.3	15.9	6.0	9.9	123.4	70.9	14.8	23.0	14.7	16.0
1977	183.8	165.5	21.6	6.2	15.4	143.9	80.6	17.9	27.5	17.8	18.3
1978	208.2	186.0	29.1	7.7	21.4	156.8	88.7	20.9	27.3	20.0	22.2
1979	214.1	180.4	27.8	9.6	18.2	152.6	87.5	15.2	28.7	21.1	33.7
1980	194.0	159.6	21.0	11.9	9.0	138.6	77.1	17.6	21.6	22.4	34.4
1981	202.3	173.8	16.5	14.5	1.9	157.3	88.5	19.5	32.5	16.8	28.5
1982	159.2	131.2	11.8	15.4	−3.6	119.4	58.0	19.3	34.6	7.5	28.0
1983	196.7	166.6	18.1	14.8	3.3	148.5	70.1	28.5	38.9	10.9	30.2
1984	234.2	203.3	13.0	16.7	−3.7	190.3	88.8	38.5	51.2	11.8	30.9
1985	222.6	191.4	22.8	16.8	6.1	168.6	79.7	33.0	44.1	11.8	31.2
1986	228.3	195.2	32.0	16.0	16.0	163.2	59.5	36.3	44.1	23.4	33.1
1987	255.9	218.4	20.7	16.2	4.4	197.8	86.7	40.6	37.9	32.6	37.5
1988	289.8	246.5	22.4	18.1	4.3	224.1	106.5	44.1	37.1	36.4	43.3
1989	286.1	235.2	15.4	20.7	−5.2	219.8	96.1	43.6	38.7	41.4	50.9
1990 p	292.1	238.1	18.6	21.9	−3.3	219.6	91.8	42.0	40.3	45.5	54.0
1982: IV	150.7	121.6	18.7	14.8	3.9	102.9	46.8	16.3	33.6	6.2	29.1
1983: IV	223.4	190.7	15.5	15.4	.1	175.2	88.6	31.3	43.1	12.2	32.7
1984: IV	224.6	193.9	13.6	17.4	−3.8	180.3	79.8	38.1	51.8	10.5	30.6
1985: IV	228.4	193.6	26.0	16.3	9.7	167.6	83.8	30.6	38.5	14.6	34.8
1986: IV	226.1	193.4	28.6	15.6	12.9	164.8	64.8	35.3	41.0	23.8	32.6
1987: IV	268.6	226.2	19.8	16.6	3.2	206.4	98.2	40.8	37.8	29.6	42.4
1988: I	278.0	235.7	19.2	17.4	1.8	216.4	103.2	40.1	38.2	35.0	42.4
II	285.3	244.9	21.1	17.3	3.8	223.8	106.8	44.2	35.0	37.8	40.4
III	287.1	243.5	25.0	18.2	6.8	218.5	103.3	45.1	33.0	37.0	43.7
IV	308.7	261.9	24.1	19.3	4.8	237.8	112.6	47.2	42.3	35.7	46.8
1989: I	292.1	241.5	24.0	20.2	3.8	217.4	102.0	45.0	33.7	36.8	50.6
II	291.5	244.9	21.6	21.1	.5	223.4	98.9	46.2	37.6	40.7	46.6
III	285.3	236.0	9.2	20.5	−11.3	226.9	99.9	42.9	41.4	42.7	49.3
IV	275.3	218.4	6.9	20.8	−13.9	211.5	83.7	40.2	41.9	45.7	56.9
1990: I	285.5	232.6	16.1	20.8	−4.7	216.5	90.1	41.5	39.2	45.7	52.9
II	298.8	249.9	18.2	21.1	−2.9	231.7	100.8	41.9	44.4	44.6	48.9
III	298.7	241.1	21.7	22.6	−.8	219.3	91.2	42.8	39.5	45.9	57.6

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[1] Consists of the following industries: Banking; credit agencies other than banks; security and commodity brokers, dealers, and services; insurance carriers; regulated investment companies; small business investment companies; and real estate investment trusts.

[2] See Table B–89 for industry detail.

Note.—The industry classification is on a company basis and is based on the 1972 Standard Industrial Classification (SIC) beginning 1948, and on the 1942 SIC prior to 1948.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–89.—*Corporate profits of manufacturing industries, 1929–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Corporate profits with inventory valuation adjustment and without capital consumption adjustment												
		Durable goods							Nondurable goods				
	Total manufacturing	Total	Primary metal industries	Fabricated metal products	Machinery, except electrical	Electric and electronic equipment	Motor vehicles and equipment	Other	Total	Food and kindred products	Chemicals and allied products	Petroleum and coal products	Other
1929	5.2	2.6	......	......	......	......	......	......	2.6	......	......	......	......
1933	–.4	–.4	......	......	......	......	......	......	.0	......	......	......	......
1939	3.3	1.7	......	......	......	......	......	......	1.7	......	......	......	......
1940	5.5	3.1	......	......	......	......	......	......	2.4	......	......	......	......
1941	9.5	6.4	......	......	......	......	......	......	3.1	......	......	......	......
1942	11.8	7.2	......	......	......	......	......	......	4.6	......	......	......	......
1943	13.8	8.1	......	......	......	......	......	......	5.7	......	......	......	......
1944	13.2	7.4	......	......	......	......	......	......	5.9	......	......	......	......
1945	9.7	4.5	......	......	......	......	......	......	5.2	......	......	......	......
1946	9.0	2.4	......	......	......	......	......	......	6.6	......	......	......	......
1947	13.6	5.8	......	......	......	......	......	......	7.8	......	......	......	......
1948	17.6	7.5	1.6	0.8	1.2	0.7	1.4	1.8	10.0	1.9	1.7	2.8	3.7
1949	16.2	8.1	1.5	.7	1.3	.8	2.1	1.7	8.1	1.6	1.8	1.9	2.8
1950	20.9	12.0	2.3	1.1	1.6	1.2	3.1	2.6	8.9	1.6	2.3	2.3	2.7
1951	24.6	13.2	3.1	1.3	2.3	1.3	2.4	2.8	11.4	1.4	2.8	2.7	4.4
1952	21.7	11.7	1.9	1.0	2.3	1.5	2.4	2.6	9.9	1.7	2.3	2.3	3.6
1953	22.0	11.9	2.5	1.0	1.9	1.4	2.6	2.6	10.1	1.8	2.2	2.8	3.3
1954	19.9	10.5	1.7	.9	1.7	1.2	2.1	2.9	9.4	1.6	2.2	2.7	2.9
1955	26.0	14.3	2.9	1.1	1.7	1.1	4.1	3.5	11.8	2.2	3.0	3.0	3.6
1956	24.7	12.8	3.0	1.1	2.1	1.2	2.2	3.2	11.9	1.8	2.8	3.3	4.1
1957	24.0	13.3	3.0	1.1	2.0	1.5	2.6	3.1	10.7	1.8	2.8	2.6	3.6
1958	19.4	9.3	1.9	.9	1.4	1.3	.9	2.9	10.0	2.1	2.5	2.1	3.3
1959	26.4	13.7	2.3	1.1	2.1	1.7	3.0	3.5	12.7	2.4	3.5	2.5	4.3
1960	23.6	11.6	2.0	.8	1.8	1.3	3.0	2.7	12.0	2.2	3.1	2.5	4.2
1961	23.3	11.4	1.6	1.0	1.9	1.3	2.5	3.1	11.9	2.3	3.2	2.2	4.1
1962	26.0	14.0	1.6	1.1	2.3	1.5	4.0	3.5	12.0	2.3	3.2	2.2	4.3
1963	29.3	16.3	2.0	1.3	2.5	1.6	4.9	4.0	13.1	2.7	3.6	2.1	4.6
1964	32.3	17.9	2.5	1.4	3.3	1.7	4.7	4.4	14.4	2.7	4.0	2.4	5.3
1965	39.3	23.0	3.1	2.0	3.9	2.7	6.2	5.1	16.3	2.8	4.6	2.9	6.0
1966	41.9	23.8	3.6	2.4	4.5	3.0	5.1	5.2	18.1	3.2	4.9	3.2	6.8
1967	38.6	21.0	2.7	2.4	4.1	2.9	3.9	4.9	17.6	3.2	4.3	3.9	6.3
1968	41.4	22.2	1.9	2.3	4.1	2.8	5.5	5.7	19.1	3.2	5.2	3.7	7.0
1969	36.7	19.0	1.4	2.0	3.7	2.3	4.8	4.9	17.7	3.0	4.6	3.3	6.9
1970	26.7	10.2	.8	1.1	3.0	1.2	1.2	2.9	16.5	3.2	3.9	3.5	5.9
1971	34.3	16.4	.7	1.5	2.9	1.9	5.1	4.3	17.9	3.5	4.5	3.6	6.4
1972	40.8	22.5	1.6	2.1	4.3	2.8	5.9	5.8	18.3	2.9	5.2	3.0	7.2
1973	46.2	24.7	2.3	2.6	4.7	3.0	5.8	6.2	21.6	2.5	6.0	5.2	7.9
1974	39.8	14.6	4.9	1.6	3.1	.3	.7	4.0	25.2	2.5	5.1	10.7	7.0
1975	53.6	19.8	2.7	3.1	4.8	2.4	2.0	4.8	33.8	8.8	6.4	9.5	9.1
1976	70.9	31.3	2.0	3.9	6.7	3.7	7.2	7.9	39.6	7.1	8.2	13.1	11.2
1977	80.6	38.6	1.3	4.4	8.9	5.8	9.4	8.8	42.0	6.9	7.8	12.9	14.4
1978	88.7	44.6	3.5	4.9	9.6	6.7	8.9	10.9	44.0	6.2	8.2	14.7	14.9
1979	87.5	37.3	3.6	5.2	9.1	5.2	4.7	9.5	50.2	5.8	7.2	22.5	14.7
1980	77.1	21.3	2.5	4.3	7.7	4.7	–2.5	4.5	55.8	6.1	5.4	31.4	12.9
1981	88.5	21.0	3.1	4.4	8.6	4.1	.1	.7	67.5	8.7	8.2	36.5	14.1
1982	58.0	2.1	–4.9	2.4	4.1	1.7	–.8	–.4	55.9	7.0	5.2	29.1	14.5
1983	70.1	17.2	–4.9	3.0	3.1	3.7	5.1	7.2	53.0	7.2	6.7	21.4	17.7
1984	88.8	38.1	–.6	4.7	6.2	5.5	9.0	13.3	50.7	6.7	8.0	17.2	18.8
1985	79.7	28.5	–1.4	4.6	3.2	3.6	7.2	11.3	51.2	8.3	6.2	17.5	19.2
1986	59.5	30.8	2.6	4.8	3.0	2.9	4.1	13.3	28.7	7.8	7.6	–7.6	20.9
1987	86.7	41.0	2.8	5.1	6.3	6.2	2.8	17.8	45.7	11.1	15.6	–2.6	21.6
1988	106.5	42.8	6.3	6.3	7.0	6.7	1.5	14.9	63.7	14.5	21.9	4.4	22.9
1989	96.1	37.1	6.2	6.7	4.7	7.4	–1.9	13.9	59.0	14.0	21.7	.3	23.1
1990 ^{p}	91.8	33.5	4.3	5.5	6.9	7.3	–6.0	15.6	58.3	14.3	21.9	2.9	19.2
1982: IV	46.8	–6.6	–5.1	.9	1.3	.1	–2.7	–1.2	53.5	7.1	3.2	25.9	17.3
1983: IV	88.6	29.4	–4.4	4.4	4.7	6.2	8.7	9.9	59.2	8.0	7.8	25.3	18.1
1984: IV	79.8	36.6	–.8	5.6	5.5	5.5	8.8	12.0	43.2	5.9	7.1	12.9	17.3
1985: IV	83.8	28.0	–1.2	4.0	4.0	2.5	7.8	10.9	55.8	8.5	3.6	25.5	18.2
1986: IV	64.8	33.4	3.7	4.4	2.2	3.2	3.8	16.1	31.4	8.7	9.1	–11.3	24.9
1987: IV	98.2	33.3	2.7	6.3	5.5	2.5	–.3	16.5	64.9	14.1	19.8	7.7	23.3
1988: I	103.2	36.2	4.2	7.4	7.5	3.1	–1.3	15.4	67.0	14.2	21.8	5.8	25.2
II	106.8	46.5	6.8	6.7	9.3	6.6	–.4	17.5	60.3	14.5	21.2	1.3	23.4
III	103.3	43.1	6.8	4.7	7.5	8.5	3.1	12.5	60.2	13.9	19.2	4.9	22.2
IV	112.6	45.5	7.6	6.5	3.9	8.4	4.8	14.2	67.2	15.5	25.3	5.7	20.7
1989: I	102.0	40.9	6.6	7.8	3.3	7.2	2.3	13.7	61.0	16.4	22.0	–1.0	23.7
II	98.9	39.6	7.0	7.2	5.0	7.6	–1.4	14.2	59.2	14.0	22.8	–1.6	24.1
III	99.9	37.4	7.0	7.2	5.0	6.0	–2.7	15.1	62.4	13.3	21.6	3.9	23.6
IV	83.7	30.2	4.3	4.6	5.7	8.9	–5.8	12.6	53.5	12.4	20.1	–.1	21.1
1990: I	90.1	37.4	4.9	6.4	7.3	8.6	–7.2	17.4	52.7	10.9	21.9	1.0	18.9
II	100.8	39.5	5.4	6.0	7.9	7.8	–4.3	16.7	61.3	15.3	22.7	3.7	19.6
III	91.2	30.2	3.6	4.8	6.3	6.6	–5.4	14.3	60.9	15.7	22.1	3.7	19.4

Note.—The industry classification is on a company basis and is based on the 1972 Standard Industrial Classification (SIC) beginning 1948, and on the 1942 SIC prior to 1948.

Source: Department of Commerce, Bureau of Economic Analysis.

Table B–90.—*Sales, profits, and stockholders' equity, all manufacturing corporations, 1950–90*

[Billions of dollars]

Year or quarter	All manufacturing corporations				Durable goods industries				Nondurable goods industries			
	Sales (net)	Profits		Stock-holders' equity [2]	Sales (net)	Profits		Stock-holders' equity [2]	Sales (net)	Profits		Stock-holders' equity [2]
		Before income taxes [1]	After income taxes			Before income taxes [1]	After income taxes			Before income taxes [1]	After income taxes	
1950	181.9	23.2	12.9	83.3	86.8	12.9	6.7	39.9	95.1	10.3	6.1	43.5
1951	245.0	27.4	11.9	98.3	116.8	15.4	6.1	47.2	128.1	12.1	5.7	51.1
1952	250.2	22.9	10.7	103.7	122.0	12.9	5.5	49.8	128.0	10.0	5.2	53.9
1953	265.9	24.4	11.3	108.2	137.9	14.0	5.8	52.4	128.0	10.4	5.5	55.7
1954	248.5	20.9	11.2	113.1	122.8	11.4	5.6	54.9	125.7	9.6	5.6	58.2
1955	278.4	28.6	15.1	120.1	142.1	16.5	8.1	58.8	136.3	12.1	7.0	61.3
1956	307.3	29.8	16.2	131.6	159.5	16.5	8.3	65.2	147.8	13.2	7.8	66.4
1957	320.0	28.2	15.4	141.1	166.0	15.8	7.9	70.5	154.1	12.4	7.5	70.6
1958	305.3	22.7	12.7	147.4	148.6	11.4	5.8	72.8	156.7	11.3	6.9	74.6
1959	338.0	29.7	16.3	157.1	169.4	15.8	8.1	77.9	168.5	13.9	8.3	79.2
1960	345.7	27.5	15.2	165.4	173.9	14.0	7.0	82.3	171.8	13.5	8.2	83.1
1961	356.4	27.5	15.3	172.6	175.2	13.6	6.9	84.9	181.2	13.9	8.5	87.7
1962	389.4	31.9	17.7	181.4	195.3	16.8	8.6	89.1	194.1	15.1	9.2	92.3
1963	412.7	34.9	19.5	189.7	209.0	18.5	9.5	93.3	203.6	16.4	10.0	96.3
1964	443.1	39.6	23.2	199.8	226.3	21.2	11.6	98.5	216.8	18.3	11.6	101.3
1965	492.2	46.5	27.5	211.7	257.0	26.2	14.5	105.4	235.2	20.3	13.0	106.3
1966	554.2	51.8	30.9	230.3	291.7	29.2	16.4	115.2	262.4	22.6	14.6	115.1
1967	575.4	47.8	29.0	247.6	300.6	25.7	14.6	125.0	274.8	22.0	14.4	122.6
1968	631.9	55.4	32.1	265.9	335.5	30.6	16.5	135.6	296.4	24.8	15.5	130.3
1969	694.6	58.1	33.2	289.9	366.5	31.5	16.9	147.6	328.1	26.6	16.4	142.3
1970	708.8	48.1	28.6	306.8	363.1	23.0	12.9	155.1	345.7	25.2	15.7	151.7
1971	751.1	52.9	31.0	320.8	381.8	26.5	14.5	160.4	369.3	26.5	16.5	160.5
1972	849.5	63.2	36.5	343.4	435.8	33.6	18.4	171.4	413.7	29.6	18.0	172.0
1973	1,017.2	81.4	48.1	374.1	527.3	43.6	24.8	188.7	489.9	37.8	23.3	185.4
1973: IV	275.1	21.4	13.0	386.4	140.1	10.8	6.3	194.7	135.0	10.6	6.7	191.7
New series:												
1973: IV	236.6	20.6	13.2	368.0	122.7	10.1	6.2	185.8	113.9	10.5	7.0	182.1
1974	1,060.6	92.1	58.7	395.0	529.0	41.1	24.7	196.0	531.6	51.0	34.1	199.0
1975	1,065.2	79.9	49.1	423.4	521.1	35.3	21.4	208.1	544.1	44.6	27.7	215.3
1976	1,203.2	104.9	64.5	462.7	589.6	50.7	30.8	224.3	613.7	54.3	33.7	238.4
1977	1,328.1	115.1	70.4	496.7	657.3	57.9	34.8	239.9	670.8	57.2	35.5	256.8
1978	1,496.4	132.5	81.1	540.5	760.7	69.6	41.8	262.6	735.7	62.9	39.3	277.9
1979	1,741.8	154.2	98.7	600.5	865.7	72.4	45.2	292.5	876.1	81.8	53.5	308.0
1980	1,912.8	145.8	92.6	668.1	889.1	57.4	35.6	317.7	1,023.7	88.4	56.9	350.4
1981	2,144.7	158.6	101.3	743.4	979.5	67.2	41.6	350.4	1,165.2	91.3	59.6	393.0
1982	2,039.4	108.2	70.9	770.2	913.1	34.7	21.7	355.5	1,126.4	73.6	49.3	414.7
1983	2,114.3	133.1	85.8	812.8	973.5	48.7	30.0	372.4	1,140.8	84.4	55.8	440.4
1984	2,335.0	165.6	107.6	864.2	1,107.6	75.5	48.9	395.6	1,227.5	90.0	58.8	468.5
1985	2,331.4	137.0	87.6	866.2	1,142.6	61.5	38.6	420.9	1,188.8	75.6	49.1	445.3
1986	2,220.9	129.3	83.1	874.7	1,125.5	52.1	32.6	436.3	1,095.4	77.2	50.5	438.4
1987	2,378.2	173.0	115.6	900.9	1,178.0	78.0	53.0	444.3	1,200.3	95.1	62.6	456.6
1988	2,596.2	216.1	154.6	957.6	1,284.7	91.7	67.1	468.7	1,311.5	124.4	87.5	488.9
1989	2,745.1	188.8	136.3	998.9	1,356.6	75.2	55.7	501.2	1,388.5	113.5	80.6	497.7
1988: I	614.2	51.2	37.1	935.8	300.8	21.3	15.5	458.6	313.4	29.9	21.6	477.2
II	655.5	58.6	41.6	952.0	326.3	26.5	19.5	466.8	329.2	32.1	22.2	485.2
III	646.3	54.0	38.5	962.6	316.7	22.0	15.9	470.1	329.6	32.0	22.7	492.5
IV	680.2	52.2	37.4	979.9	340.9	21.9	16.3	479.1	339.4	30.4	21.1	500.8
1989: I	666.0	53.3	37.9	988.6	331.7	22.0	15.9	495.8	334.3	31.4	21.9	492.8
II	707.5	53.3	36.6	991.8	352.8	23.7	16.7	500.2	354.7	29.6	19.9	491.6
III	681.3	46.7	33.4	1,001.4	332.3	18.9	13.8	502.6	348.9	27.8	19.6	498.8
IV	690.3	35.4	28.4	1,013.7	339.8	10.7	9.3	506.2	350.5	24.7	19.2	507.6
1990: I	667.4	39.8	27.9	1,021.7	324.1	16.2	11.7	504.9	343.3	23.6	16.2	516.8
II	704.1	49.9	35.1	1,036.2	353.2	21.9	15.7	515.8	350.8	28.0	19.5	520.4
III	702.0	41.7	29.3	1,050.1	337.0	12.7	9.3	518.0	365.0	28.9	20.0	532.1

[1] In the old series, "income taxes" refers to Federal income taxes only, as State and local income taxes had already been deducted. In the new series, no income taxes have been deducted.

[2] Annual data are average equity for the year (using four end-of-quarter figures).

Note.—Data are not necessarily comparable from one period to another due to changes in accounting procedures, industry classifications, sampling procedures, etc. For explanatory notes concerning compilation of the series, see "Quarterly Financial Report for Manufacturing, Mining, and Trade Corporations," Department of Commerce, Bureau of the Census.

Source: Department of Commerce, Bureau of the Census.

TABLE B–91.—*Relation of profits after taxes to stockholders' equity and to sales, all manufacturing corporations, 1947–90*

Year or quarter	Ratio of profits after income taxes (annual rate) to stockholders' equity—percent [1]			Profits after income taxes per dollar of sales—cents		
	All manufacturing corporations	Durable goods industries	Nondurable goods industries	All manufacturing corporations	Durable goods industries	Nondurable goods industries
1947	15.6	14.4	16.6	6.7	6.7	6.7
1948	16.0	15.7	16.2	7.0	7.1	6.8
1949	11.6	12.1	11.2	5.8	6.4	5.4
1950	15.4	16.9	14.1	7.1	7.7	6.5
1951	12.1	13.0	11.2	4.9	5.3	4.5
1952	10.3	11.1	9.7	4.3	4.5	4.1
1953	10.5	11.1	9.9	4.3	4.2	4.3
1954	9.9	10.3	9.6	4.5	4.6	4.4
1955	12.6	13.8	11.4	5.4	5.7	5.1
1956	12.3	12.8	11.8	5.3	5.2	5.3
1957	10.9	11.3	10.6	4.8	4.8	4.9
1958	8.6	8.0	9.2	4.2	3.9	4.4
1959	10.4	10.4	10.4	4.8	4.8	4.9
1960	9.2	8.5	9.8	4.4	4.0	4.8
1961	8.9	8.1	9.6	4.3	3.9	4.7
1962	9.8	9.6	9.9	4.5	4.4	4.7
1963	10.3	10.1	10.4	4.7	4.5	4.9
1964	11.6	11.7	11.5	5.2	5.1	5.4
1965	13.0	13.8	12.2	5.6	5.7	5.5
1966	13.4	14.2	12.7	5.6	5.6	5.6
1967	11.7	11.7	11.8	5.0	4.8	5.3
1968	12.1	12.2	11.9	5.1	4.9	5.2
1969	11.5	11.4	11.5	4.8	4.6	5.0
1970	9.3	8.3	10.3	4.0	3.5	4.5
1971	9.7	9.0	10.3	4.1	3.8	4.5
1972	10.6	10.8	10.5	4.3	4.2	4.4
1973	12.8	13.1	12.6	4.7	4.7	4.8
1973: IV	13.4	12.9	14.0	4.7	4.5	5.0
New series:						
1973: IV	14.3	13.3	15.3	5.6	5.0	6.1
1974	14.9	12.6	17.1	5.5	4.7	6.4
1975	11.6	10.3	12.9	4.6	4.1	5.1
1976	13.9	13.7	14.2	5.4	5.2	5.5
1977	14.2	14.5	13.8	5.3	5.3	5.3
1978	15.0	16.0	14.2	5.4	5.5	5.3
1979	16.4	15.4	17.4	5.7	5.2	6.1
1980	13.9	11.2	16.3	4.8	4.0	5.6
1981	13.6	11.9	15.2	4.7	4.2	5.1
1982	9.2	6.1	11.9	3.5	2.4	4.4
1983	10.6	8.1	12.7	4.1	3.1	4.9
1984	12.5	12.4	12.5	4.6	4.4	4.8
1985	10.1	9.2	11.0	3.8	3.4	4.1
1986	9.5	7.5	11.5	3.7	2.9	4.6
1987	12.8	11.9	13.7	4.9	4.5	5.2
1988	16.1	14.3	17.9	6.0	5.2	6.7
1989	13.6	11.1	16.2	5.0	4.1	5.8
1988: I	15.8	13.5	18.1	6.0	5.1	6.9
II	17.5	16.7	18.3	6.3	6.0	6.7
III	16.0	13.5	18.4	6.0	5.0	6.9
IV	15.3	13.6	16.9	5.5	4.8	6.2
1989: I	15.3	12.9	17.8	5.7	4.8	6.6
II	14.8	13.4	16.2	5.2	4.7	5.6
III	13.4	11.0	15.7	4.9	4.2	5.6
IV	11.2	7.3	15.1	4.1	2.7	5.5
1990: I	10.9	9.3	12.6	4.2	3.6	4.7
II	13.6	12.1	15.0	5.0	4.4	5.6
III	11.2	7.2	15.0	4.2	2.8	5.5

[1] Annual ratios based on average equity for the year (using four end-of-quarter figures). Quarterly ratios based on equity at end of quarter only.

Note.—Based on data in millions of dollars.
See Note, Table B–90.

Source: Department of Commerce, Bureau of the Census.

TABLE B-92.—*Sources and uses of funds, nonfarm nonfinancial corporate business, 1946–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Sources											Uses			Discrepancy (sources less uses)
	Total	Internal					External					Total	Capital expenditures [3]	Increase in financial assets	
		Total	U.S. undistributed profits	Inventory valuation and capital consumption adjustments	Capital consumption allowances	Foreign earnings [1]	Total	Credit market funds			Other [2]				
								Total	Securities and mortgages	Loans and short-term paper					
1946	19.1	8.5	8.5	−7.6	7.3	0.3	10.6	7.1	3.6	3.6	3.5	17.4	18.8	−1.4	1.7
1947	27.5	13.3	12.7	−8.7	9.0	.3	14.1	8.4	5.4	3.0	5.7	26.4	18.1	8.4	1.0
1948	29.5	19.7	14.0	−5.2	10.4	.4	9.9	7.4	6.7	.7	2.5	25.7	20.7	5.0	3.9
1949	20.5	20.0	9.6	−1.0	11.2	.3	.4	3.0	4.9	−1.9	−2.6	18.4	14.9	3.5	2.0
1950	42.6	18.5	14.1	−7.9	12.0	.3	24.0	8.1	4.2	3.9	16.0	40.4	24.0	16.4	2.2
1951	36.9	20.8	10.8	−4.4	13.8	.6	16.2	10.9	6.4	4.4	5.3	37.9	30.5	7.4	−1.0
1952	30.2	22.5	8.9	−2.0	14.8	.8	7.8	9.2	8.1	1.1	−1.4	30.1	25.6	4.6	.1
1953	28.6	22.3	9.2	−3.3	15.9	.7	6.2	5.8	6.2	−.4	.4	28.3	26.0	2.3	.2
1954	29.8	24.4	9.0	−1.9	16.8	.5	5.4	6.3	6.7	−.5	−.9	28.1	23.2	4.9	1.7
1955	53.4	29.9	13.4	−2.0	17.8	.8	23.4	10.3	6.6	3.7	13.2	48.9	32.4	16.5	4.4
1956	45.1	30.0	12.7	−3.7	20.0	1.0	15.1	12.6	7.4	5.3	2.4	41.0	37.1	4.0	4.1
1957	43.5	32.0	11.5	−2.7	22.0	1.2	11.5	12.0	10.1	1.9	−.5	39.9	35.7	4.2	3.6
1958	42.2	30.7	8.3	−1.5	23.1	.8	11.6	10.4	10.5	−.1	1.2	38.6	27.8	10.8	3.6
1959	56.6	36.4	12.5	−1.0	24.1	.9	20.2	12.2	8.3	4.0	8.0	52.1	37.9	14.2	4.5
1960	48.2	35.8	9.9	−.4	25.1	1.2	12.4	11.3	7.4	3.9	1.0	41.5	37.6	3.9	6.7
1961	55.8	36.9	9.5	.6	25.9	.9	18.9	12.0	10.5	1.5	6.9	50.8	36.5	14.2	5.0
1962	60.6	43.2	12.2	3.1	26.8	1.1	17.4	13.0	9.0	3.9	4.5	55.9	43.5	12.5	4.7
1963	68.5	47.0	13.7	3.9	28.0	1.4	21.6	11.9	8.1	3.8	9.6	60.5	44.8	15.7	8.1
1964	74.2	52.3	17.7	3.9	29.4	1.3	21.9	13.8	7.8	6.0	8.1	64.6	49.7	14.9	9.6
1965	92.7	59.1	22.4	3.9	31.5	1.4	33.6	18.9	7.0	11.9	14.7	83.3	61.4	21.8	9.4
1966	99.0	63.3	24.0	3.3	34.3	1.7	35.7	24.7	14.3	10.4	11.0	92.3	75.6	16.7	6.7
1967	94.9	64.3	21.2	3.9	37.6	1.6	30.7	27.3	19.2	8.2	3.4	88.0	71.6	16.4	6.9
1968	114.0	65.8	20.4	1.7	41.4	2.3	48.3	27.5	15.0	12.6	20.7	107.7	77.0	30.8	6.3
1969	116.0	65.2	17.1	.0	45.4	2.8	50.8	32.4	14.6	17.8	18.4	116.4	84.7	31.7	−.4
1970	101.7	62.7	11.3	−1.6	49.8	3.2	39.0	34.2	26.3	7.8	4.9	99.6	80.9	18.7	2.1
1971	127.4	74.6	17.2	−.5	54.7	3.2	52.7	37.4	32.8	4.6	15.3	123.1	86.4	36.7	4.3
1972	153.2	86.2	22.8	−1.2	60.0	4.6	67.0	42.4	26.4	16.0	24.6	146.4	96.3	50.1	6.8
1973	215.0	93.7	35.2	−14.7	65.0	8.1	121.3	76.3	44.4	31.9	45.0	191.3	120.5	70.7	23.8
1974	178.7	89.0	43.3	−38.1	76.0	7.7	89.7	54.9	21.4	33.5	34.8	191.4	138.9	52.5	−12.7
1975	155.0	124.2	42.7	−17.9	91.3	8.1	30.8	23.1	39.4	−16.3	7.7	151.0	109.9	41.1	4.0
1976	211.8	141.3	57.5	−25.4	101.6	7.6	70.5	50.7	42.4	8.3	19.9	208.8	155.4	53.5	3.0
1977	258.0	164.4	68.7	−26.0	113.6	8.0	93.6	69.4	44.6	24.8	24.2	241.8	179.3	62.6	16.2
1978	311.6	181.9	77.3	−36.6	129.5	11.7	129.7	70.9	37.6	33.2	58.8	325.3	217.7	107.7	−13.7
1979	323.3	197.2	86.6	−57.2	149.3	18.6	126.1	60.3	9.0	51.3	65.8	368.7	238.9	129.8	−45.4
1980	320.8	199.8	69.4	−59.2	170.9	18.7	121.0	68.6	28.0	40.6	52.5	342.1	243.7	98.4	−21.3
1981	375.8	239.1	64.7	−38.0	198.4	14.0	136.7	90.6	23.4	67.2	46.0	383.3	286.3	97.0	−7.5
1982	300.8	241.9	24.1	−18.7	221.0	15.5	58.9	48.5	−6.2	54.7	10.4	303.1	256.1	47.0	−2.3
1983	417.0	285.2	33.9	5.1	227.7	18.4	131.7	76.5	41.0	35.5	55.2	392.6	270.5	122.1	24.3
1984	491.4	335.9	53.6	25.1	238.1	19.2	155.5	91.9	−13.7	105.5	63.6	474.9	369.7	105.2	16.5
1985	455.7	351.8	28.9	53.5	250.5	18.9	103.9	49.8	−6.3	56.0	54.1	425.1	341.2	83.9	30.6
1986	524.1	344.3	7.3	56.3	265.3	15.5	179.8	124.7	60.5	64.2	55.1	481.2	330.4	150.8	43.0
1987	493.7	372.4	42.8	27.1	279.6	22.9	121.3	48.2	18.5	29.7	73.0	466.6	354.1	112.5	27.1
1988	548.1	391.4	68.8	12.8	295.3	14.5	156.8	55.1	−15.4	70.5	101.6	494.6	378.3	116.3	53.5
1989	512.7	380.0	35.9	−2.9	315.4	31.6	132.7	35.4	−45.0	80.4	97.3	488.5	382.2	106.2	24.2
1988:															
I	578.9	389.7	68.7	23.0	289.0	9.0	189.2	97.9	5.3	92.7	91.3	504.2	362.9	141.3	74.7
II	570.2	388.6	73.1	12.0	292.9	10.6	181.6	67.1	−3.7	70.8	114.6	505.2	379.2	126.0	65.0
III	544.3	388.3	60.7	5.7	296.7	25.2	156.0	84.2	30.3	53.9	71.8	499.6	386.7	112.9	44.7
IV	499.2	399.0	72.7	10.4	302.5	13.4	100.2	−28.7	−93.4	64.8	128.9	469.6	384.6	85.0	29.6
1989:															
I	517.5	379.9	46.0	−15.4	307.0	42.4	137.5	18.0	−92.5	110.5	119.6	484.2	377.4	106.8	33.2
II	601.2	379.7	44.2	−.2	310.4	25.3	221.5	118.7	3.1	115.6	102.7	560.0	388.3	171.7	41.2
III	459.2	385.5	27.4	8.9	320.0	29.2	73.7	1.0	−85.2	86.2	72.6	444.4	385.1	59.3	14.9
IV	472.9	374.9	25.8	−4.8	324.3	29.6	98.1	3.8	−5.6	9.4	94.3	465.3	378.2	87.1	7.7
1990:															
I	498.5	370.6	14.7	−6.1	323.7	38.2	127.9	93.8	1.4	92.3	34.2	470.0	343.1	126.9	28.6
II	479.7	374.7	23.0	.7	325.6	25.4	104.9	43.3	23.4	19.9	61.6	496.7	377.4	119.3	−17.0
III	447.6	361.0	19.4	−26.1	330.9	36.8	86.6	15.9	−26.6	42.5	70.7	465.6	389.0	76.6	−18.0

[1] Foreign branch profits, dividends, and subsidiaries' earnings retained abroad.

[2] Consists of tax liabilities, trade debt, and direct foreign investment in the United States.

[3] Plant and equipment, residential structures, inventory investment, and mineral rights from U.S. Government.

Source: Board of Governors of the Federal Reserve System.

TABLE B–93.—*Common stock prices and yields, 1949–90*

Year or month	Common stock prices [1]							Common stock yields (percent) [5]	
	New York Stock Exchange indexes (Dec. 31, 1965=50) [2]					Dow Jones industrial average [3]	Standard & Poor's composite index (1941–43=10) [4]		
	Composite	Industrial	Transportation	Utility	Finance			Dividend-price ratio [6]	Earnings-price ratio [7]
1949	9.02	......	......	......	......	179.48	15.23	6.59	15.48
1950	10.87	......	......	......	......	216.31	18.40	6.57	13.99
1951	13.08	......	......	......	......	257.64	22.34	6.13	11.82
1952	13.81	......	......	......	......	270.76	24.50	5.80	9.47
1953	13.67	......	......	......	......	275.97	24.73	5.80	10.26
1954	16.19	......	......	......	......	333.94	29.69	4.95	8.57
1955	21.54	......	......	......	......	442.72	40.49	4.08	7.95
1956	24.40	......	......	......	......	493.01	46.62	4.09	7.55
1957	23.67	......	......	......	......	475.71	44.38	4.35	7.89
1958	24.56	......	......	......	......	491.66	46.24	3.97	6.23
1959	30.73	......	......	......	......	632.12	57.38	3.23	5.78
1960	30.01	......	......	......	......	618.04	55.85	3.47	5.90
1961	35.37	......	......	......	......	691.55	66.27	2.98	4.62
1962	33.49	......	......	......	......	639.76	62.38	3.37	5.82
1963	37.51	......	......	......	......	714.81	69.87	3.17	5.50
1964	43.76	......	......	......	......	834.05	81.37	3.01	5.32
1965	47.39	......	......	......	......	910.88	88.17	3.00	5.59
1966	46.15	46.18	50.26	45.41	44.45	873.60	85.26	3.40	6.63
1967	50.77	51.97	53.51	45.43	49.82	879.12	91.93	3.20	5.73
1968	55.37	58.00	50.58	44.19	65.85	906.00	98.70	3.07	5.67
1969	54.67	57.44	46.96	42.80	70.49	876.72	97.84	3.24	6.08
1970	45.72	48.03	32.14	37.24	60.00	753.19	83.22	3.83	6.45
1971	54.22	57.92	44.35	39.53	70.38	884.76	98.29	3.14	5.41
1972	60.29	65.73	50.17	38.48	78.35	950.71	109.20	2.84	5.50
1973	57.42	63.08	37.74	37.69	70.12	923.88	107.43	3.06	7.12
1974	43.84	48.08	31.89	29.79	49.67	759.37	82.85	4.47	11.59
1975	45.73	50.52	31.10	31.50	47.14	802.49	86.16	4.31	9.15
1976	54.46	60.44	39.57	36.97	52.94	974.92	102.01	3.77	8.90
1977	53.69	57.86	41.09	40.92	55.25	894.63	98.20	4.62	10.79
1978	53.70	58.23	43.50	39.22	56.65	820.23	96.02	5.28	12.03
1979	58.32	64.76	47.34	38.20	61.42	844.40	103.01	5.47	13.46
1980	68.10	78.70	60.61	37.35	64.25	891.41	118.78	5.26	12.66
1981	74.02	85.44	72.61	38.91	73.52	932.92	128.05	5.20	11.96
1982	68.93	78.18	60.41	39.75	71.99	884.36	119.71	5.81	11.60
1983	92.63	107.45	89.36	47.00	95.34	1,190.34	160.41	4.40	8.03
1984	92.46	108.01	85.63	46.44	89.28	1,178.48	160.46	4.64	10.02
1985	108.09	123.79	104.11	56.75	114.21	1,328.23	186.84	4.25	8.12
1986	136.00	155.85	119.87	71.36	147.20	1,792.76	236.34	3.49	6.09
1987	161.70	195.31	140.39	74.30	146.48	2,275.99	286.83	3.08	5.48
1988	149.91	180.95	134.12	71.77	127.26	2,060.82	265.79	3.64	8.01
1989	180.02	216.23	175.28	87.43	151.88	2,508.91	322.84	3.45	7.41
1990	183.46	225.78	158.62	90.60	133.26	2,678.94	334.59	3.61	......
1989: Jan	160.40	194.62	153.09	75.87	132.26	2,234.68	285.41	3.64	......
Feb	165.08	200.00	162.66	77.84	137.19	2,304.30	294.01	3.59	......
Mar	164.60	199.20	160.14	77.66	137.91	2,283.11	292.71	3.68	8.46
Apr	169.38	204.81	164.32	79.69	143.26	2,348.91	302.25	3.59	......
May	175.30	211.51	168.89	84.07	146.59	2,439.55	313.93	3.52	......
June	180.76	216.75	173.47	87.90	154.08	2,494.90	323.73	3.44	7.93
July	185.15	221.74	179.32	90.40	157.78	2,554.03	331.93	3.38	......
Aug	192.94	231.32	197.52	92.91	164.86	2,691.11	346.61	3.28	......
Sept	193.02	230.86	202.02	93.44	165.51	2,693.41	347.33	3.29	6.79
Oct	192.49	229.40	190.36	94.67	166.55	2,692.01	347.40	3.29	......
Nov	188.50	224.38	174.26	94.95	160.89	2,642.49	340.22	3.39	......
Dec.	192.67	230.12	177.25	99.73	155.63	2,728.47	348.57	3.33	6.47
1990: Jan	187.96	225.79	173.67	95.69	150.11	2,679.24	339.97	3.41	......
Feb	182.55	220.60	166.58	92.15	142.68	2,614.18	330.45	3.54	......
Mar	186.26	226.14	175.08	93.00	143.13	2,700.13	338.47	3.49	6.37
Apr	185.61	226.86	173.55	91.92	138.57	2,708.26	338.18	3.51	......
May	191.35	234.85	173.53	93.29	142.94	2,793.81	350.25	3.44	......
June	196.68	242.42	177.37	93.65	147.93	2,894.82	360.39	3.36	5.94
July	196.61	245.86	173.18	89.85	143.11	2,934.23	360.03	3.37	......
Aug	181.45	226.73	147.41	85.81	128.14	2,681.89	330.75	3.65	......
Sept	173.22	216.81	136.95	83.30	118.59	2,550.69	315.41	3.85	7.10
Oct	168.05	208.58	131.90	87.27	108.01	2,460.54	307.12	4.01	......
Nov	172.21	212.81	132.96	89.69	113.76	2,518.56	315.29	3.91	......
Dec	179.57	221.88	141.31	91.56	122.18	2,610.92	328.75	3.74	......

[1] Averages of daily closing prices, except New York Stock Exchange data through May 1964 are averages of weekly closing prices.
[2] Includes all the stocks (more than 1,500) listed on the New York Stock Exchange.
[3] Includes 30 stocks.
[4] Includes 500 stocks.
[5] Standard & Poor's series, based on 500 stocks in the composite index.
[6] Aggregate cash dividends (based on latest known annual rate) divided by aggregate market value based on Wednesday closing prices. Monthly data are averages of weekly figures; annual data are averages of monthly figures.
[7] Quarterly data are ratio of earnings (after taxes) for 4 quarters ending with particular quarter to price index for last day of that quarter. Annual data are averages of quarterly ratios.

Note.—All data relate to stocks listed on the New York Stock Exchange.

Sources: New York Stock Exchange, Dow Jones & Co., Inc., and Standard & Poor's Corporation.

TABLE B–94.—*Business formation and business failures, 1946–90*

Year or month	Index of net business formation (1967=100)	New business incorporations (number)	Business failures[1]						
			Business failure rate[2]	Number of failures			Amount of current liabilities (millions of dollars)		
				Total	Liability size class		Total	Liability size class	
					Under $100,000	$100,000 and over		Under $100,000	$100,000 and over
1946	....	132,916	5.2	1,129	1,003	126	67.3	15.7	51.6
1947	....	112,897	14.3	3,474	3,103	371	204.6	63.7	140.9
1948	101.1	96,346	20.4	5,250	4,853	397	234.6	93.9	140.7
1949	83.7	85,640	34.4	9,246	8,708	538	308.1	161.4	146.7
1950	87.7	93,092	34.3	9,162	8,746	416	248.3	151.2	97.1
1951	86.7	83,778	30.7	8,058	7,626	432	259.5	131.6	128.0
1952	90.8	92,946	28.7	7,611	7,081	530	283.3	131.9	151.4
1953	89.7	102,706	33.2	8,862	8,075	787	394.2	167.5	226.6
1954	88.8	117,411	42.0	11,086	10,226	860	462.6	211.4	251.2
1955	96.6	139,915	41.6	10,969	10,113	856	449.4	206.4	243.0
1956	94.6	141,163	48.0	12,686	11,615	1,071	562.7	239.8	322.9
1957	90.3	137,112	51.7	13,739	12,547	1,192	615.3	267.1	348.2
1958	90.2	150,781	55.9	14,964	13,499	1,465	728.3	297.6	430.7
1959	97.9	193,067	51.8	14,053	12,707	1,346	692.8	278.9	413.9
1960	94.5	182,713	57.0	15,445	13,650	1,795	938.6	327.2	611.4
1961	90.8	181,535	64.4	17,075	15,006	2,069	1,090.1	370.1	720.0
1962	92.6	182,057	60.8	15,782	13,772	2,010	1,213.6	346.5	867.1
1963	94.4	186,404	56.3	14,374	12,192	2,182	1,352.6	321.0	1,031.6
1964	98.2	197,724	53.2	13,501	11,346	2,155	1,329.2	313.6	1,015.6
1965	99.8	203,897	53.3	13,514	11,340	2,174	1,321.7	321.7	1,000.0
1966	99.3	200,010	51.6	13,061	10,833	2,228	1,385.7	321.5	1,064.1
1967	100.0	206,569	49.0	12,364	10,144	2,220	1,265.2	297.9	967.3
1968	108.3	233,635	38.6	9,636	7,829	1,807	941.0	241.1	699.9
1969	115.8	274,267	37.3	9,154	7,192	1,962	1,142.1	231.3	910.8
1970	108.8	264,209	43.8	10,748	8,019	2,729	1,887.8	269.3	1,618.4
1971	111.1	287,577	41.7	10,326	7,611	2,715	1,916.9	271.3	1,645.6
1972	119.3	316,601	38.3	9,566	7,040	2,526	2,000.2	258.8	1,741.5
1973	119.1	329,358	36.4	9,345	6,627	2,718	2,298.6	235.6	2,063.0
1974	113.2	319,149	38.4	9,915	6,733	3,182	3,053.1	256.9	2,796.3
1975	109.9	326,345	42.6	11,432	7,504	3,928	4,380.2	298.6	4,081.6
1976	120.4	375,766	34.8	9,628	6,176	3,452	3,011.3	257.8	2,753.4
1977	130.8	436,170	28.4	7,919	4,861	3,058	3,095.3	208.3	2,887.0
1978	138.1	478,019	23.9	6,619	3,712	2,907	2,656.0	164.7	2,491.3
1979	138.3	524,565	27.8	7,564	3,930	3,634	2,667.4	179.9	2,487.5
1980	129.9	533,520	42.1	11,742	5,682	6,060	4,635.1	272.5	4,362.6
1981	124.8	581,242	61.3	16,794	8,233	8,561	6,955.2	405.8	6,549.3
1982	116.4	566,942	89.0	24,908	11,509	13,399	15,610.8	541.7	15,069.1
1983	117.5	600,400	110.0	31,334	15,509	15,825	16,072.9	635.1	15,437.8
1984	121.3	634,991	107.0	52,078	19,618	32,460	29,268.6	409.8	28,858.8
1985	120.9	662,047	115.0	57,253	36,551	20,702	36,808.8	790.8	36,018.0
1986	120.4	702,738	120.0	61,616	38,908	22,708	44,724.0	838.3	43,885.7
1987	121.2	685,572	102.0	61,622	39,372	22,250	36,369.9	753.6	35,616.3
1988	124.1	685,095	98.0	57,097	38,300	18,797	39,573.0	686.9	38,886.1
1989	124.8	676,565	65.0	50,361	33,304	17,057	42,797.5	670.6	42,126.9
1990 p	120.7	....	....	60,409	40,401	20,003	65,303.3	727.7	64,575.6
	Seasonally adjusted								
1989: Jan	125.5	58,253	....	4,663	3,052	1,611	2,102.9	61.1	2,041.8
Feb	125.9	58,560	....	4,284	2,887	1,397	2,377.9	58.8	2,319.1
Mar	126.5	57,383	....	4,864	3,187	1,677	6,371.2	65.5	6,305.7
Apr	125.8	57,631	....	3,966	2,588	1,378	6,170.5	51.3	6,119.2
May	125.4	57,326	....	4,473	2,995	1,478	1,863.5	60.1	1,803.4
June	125.6	56,950	....	4,251	2,819	1,432	6,318.9	57.4	6,261.5
July	124.6	54,948	....	3,746	2,486	1,260	3,992.9	48.1	3,944.8
Aug	123.2	55,500	....	4,321	2,848	1,473	3,435.0	59.5	3,375.5
Sept	123.0	55,390	....	3,728	2,476	1,252	1,782.8	51.6	1,731.2
Oct	123.4	54,651	....	4,289	2,824	1,465	2,179.3	54.6	2,124.7
Nov	123.9	55,116	....	4.039	2,651	1,388	1,892.0	52.0	1,840.0
Dec	124.8	56,945	....	3,737	2,491	1,246	4,310.6	50.6	4,260.0
1990: Jan	126.3	59,310	....	4,644	3,032	1,612	6,263.3	56.8	6,206.5
Feb	125.7	56,739	....	4,165	2,756	1,409	7,280.1	50.2	7,229.9
Mar	125.2	56,271	....	4,768	3,106	1,662	3,772.5	57.5	3,715.0
Apr	123.3	55,000	....	4,709	3,079	1,630	6,703.8	58.9	6,644.9
May	121.3	54,166	....	5,098	3,443	1,655	4,982.5	61.4	4,921.1
June	121.2	54,097	....	5,252	3,454	1,798	10,275.3	60.7	10,214.6
July	119.7	51,440	....	4,713	3,239	1,474	3,087.0	55.2	3,031.8
Aug	119.6	52,074	....	5,637	3,825	1,812	6,072.8	66.3	6,006.5
Sept	118.3	52,334	....	4,854	3,291	1,563	4,049.2	56.4	3,992.8
Oct	117.8	51,824	....	6,074	4,110	1,964	4,676.8	73.9	4,602.9
Nov	116.4	50,767	....	5,356	3,609	1,747	4,410.1	70.3	4,339.8
Dec p	113.4	....	....	5,139	3,457	1,682	3,729.9	60.1	3,669.8

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[1] Commercial and industrial failures only through 1983, excluding failures of banks, railroads, real estate, insurance, holding, and financial companies, steamship lines, travel agencies, etc.

Data beginning 1984 are based on expanded coverage and new methodology and are therefore not generally comparable with earlier data. Data for 1990 are subject to revision due to amended court filings.

[2] Failure rate per 10,000 listed enterprises.

Sources: Department of Commerce (Bureau of Economic Analysis) and The Dun & Bradstreet Corporation.

AGRICULTURE

TABLE B-95.—*Farm income, 1929–90*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Income of farm operators from farming							
	Gross farm income					Production expenses	Net farm income	
	Total [1]	Cash marketing receipts			Value of inventory changes [2]		Current dollars	1982 dollars [3]
		Total	Livestock and products	Crops				
1929	13.8	11.3	6.2	5.1	−0.1	7.7	6.2	42.1
1933	6.9	5.3	2.8	2.5	−.2	4.4	2.6	22.8
1939	10.7	7.9	4.5	3.3	.1	6.3	4.4	34.8
1940	11.3	8.4	4.9	3.5	.3	6.9	4.5	34.5
1941	14.3	11.1	6.5	4.6	.4	7.8	6.5	47.0
1942	19.9	15.6	9.0	6.5	1.1	10.0	9.9	67.0
1943	23.3	19.6	11.5	8.1	−.1	11.6	11.7	77.7
1944	24.0	20.5	11.4	9.2	−.4	12.3	11.7	76.5
1945	25.4	21.7	12.0	9.7	−.4	13.1	12.3	78.4
1946	29.6	24.8	13.8	11.0	.0	14.5	15.1	77.7
1947	32.4	29.6	16.5	13.1	−1.8	17.0	15.4	69.5
1948	36.5	30.2	17.1	13.1	1.7	18.8	17.7	74.8
1949	30.8	27.8	15.4	12.4	−.9	18.0	12.8	54.4
1950	33.1	28.5	16.1	12.4	.8	19.5	13.6	57.1
1951	38.3	32.9	19.6	13.2	1.2	22.3	15.9	63.5
1952	37.8	32.5	18.2	14.3	.9	22.8	15.0	58.7
1953	34.4	31.0	16.9	14.1	−.6	21.5	13.0	50.1
1954	34.2	29.8	16.3	13.6	.5	21.8	12.4	47.0
1955	33.5	29.5	16.0	13.5	.2	22.2	11.3	41.6
1956	34.0	30.4	16.4	14.0	−.5	22.7	11.3	40.1
1957	34.8	29.7	17.4	12.3	.6	23.7	11.1	38.1
1958	39.0	33.5	19.2	14.2	.8	25.8	13.2	44.3
1959	37.9	33.6	18.9	14.7	.0	27.2	10.7	35.2
1960	38.6	34.0	19.0	15.0	.4	27.4	11.2	36.3
1961	40.5	35.2	19.5	15.7	.3	28.6	12.0	38.3
1962	42.3	36.5	20.2	16.3	.6	30.3	12.1	37.8
1963	43.4	37.5	20.0	17.4	.6	31.6	11.8	36.3
1964	42.3	37.3	19.9	17.4	−.8	31.8	10.5	31.9
1965	46.5	39.4	21.9	17.5	1.0	33.6	12.9	38.2
1966	50.5	43.4	25.0	18.4	−.1	36.5	14.0	39.9
1967	50.5	42.8	24.4	18.4	.7	38.2	12.3	34.4
1968	51.8	44.2	25.5	18.7	.1	39.5	12.3	32.7
1969	56.4	48.2	28.6	19.6	.1	42.1	14.3	35.9
1970	58.8	50.5	29.5	21.0	.0	44.5	14.4	34.2
1971	62.1	52.7	30.5	22.3	1.4	47.1	15.0	33.8
1972	71.1	61.1	35.6	25.5	.9	51.7	19.5	41.8
1973	98.9	86.9	45.8	41.1	3.4	64.6	34.4	69.4
1974	98.2	92.4	41.3	51.1	−1.6	71.0	27.3	50.5
1975	100.6	88.9	43.1	45.8	3.4	75.0	25.5	43.1
1976	102.9	95.4	46.3	49.0	−1.5	82.7	20.2	32.0
1977	108.8	96.2	47.6	48.6	1.1	88.9	19.9	29.5
1978	128.4	112.4	59.2	53.2	1.9	103.2	25.2	34.9
1979	150.7	131.5	69.2	62.3	5.0	123.3	27.4	34.9
1980	149.3	139.7	68.0	71.7	−6.3	133.1	16.1	18.8
1981	166.3	141.6	69.2	72.5	6.5	139.4	26.9	28.6
1982	163.5	142.6	70.3	72.3	−1.4	140.0	23.5	23.5
1983	153.2	136.8	69.6	67.2	−10.9	137.9	15.3	14.7
1984	170.2	142.8	72.9	69.9	6.0	143.8	26.3	24.5
1985	162.9	144.1	69.8	74.3	−2.3	131.9	31.0	27.9
1986	156.5	135.2	71.5	63.7	−2.4	125.5	31.0	27.2
1987	169.0	141.7	76.0	65.6	−2.8	127.7	41.3	35.1
1988	173.8	150.2	78.8	71.4	−4.1	132.1	41.8	34.4
1989	189.2	159.2	83.7	75.4	4.4	142.6	46.7	37.0
1988: I	170.3	144.4	78.1	66.3	−5.6	126.4	43.9	36.9
II	175.7	146.0	76.8	69.2	−4.9	130.5	45.1	37.4
III	167.6	154.9	79.2	75.7	−3.7	135.4	32.2	26.4
IV	181.5	155.4	81.2	74.2	−2.1	135.9	45.5	36.9
1989: I	190.8	153.7	81.6	72.1	3.8	142.5	48.3	38.8
II	189.5	157.4	80.8	76.5	4.9	143.3	46.2	36.7
III	185.7	163.9	83.6	80.3	4.8	143.4	42.4	33.4
IV	190.9	161.7	88.9	72.8	4.3	141.1	49.8	38.9
1990: I	190.8	157.0	87.3	69.7	4.8	141.7	49.1	37.9
II	192.5	167.4	87.5	79.9	3.3	143.8	48.7	37.2
III	191.8	176.4	90.2	86.2	2.4	144.7	47.1	35.6

[1] Cash marketing receipts and inventory changes plus Government payments, other farm cash income, and nonmoney income furnished by farms.

[2] Physical changes in end-of-period inventory of crop and livestock commodities valued at average prices during the period.

[3] Income in current dollars divided by the GNP implicit price deflator (Department of Commerce).

Note.—Data include net Commodity Credit Corporation loans and operator households.

Source: Department of Agriculture, except as noted.

TABLE B–96.—*Farm output and productivity indexes, 1947–90*

[1977=100]

Year	Farm output						Productivity indicators		
	Total [1]	Crops [2]				Livestock and products [2]	Farm output		Crop production per acre [5]
		Total [3]	Feed grains	Food grains	Oil crops		Per unit of total input	Per hour of farm work [4]	
1947	58	56	39	64	22	65	55	18	57
1948	63	64	57	62	27	64	60	21	64
1949	62	61	50	53	26	67	57	20	60
1950	61	59	51	49	26	70	58	22	59
1951	63	60	47	49	26	73	60	24	59
1952	66	62	50	63	26	74	62	26	62
1953	66	62	49	57	26	74	64	28	62
1954	66	61	51	51	28	77	65	29	61
1955	69	63	54	48	30	79	66	30	63
1956	69	63	54	50	34	79	67	31	64
1957	67	62	58	47	33	78	67	33	65
1958	73	69	64	69	39	79	74	39	73
1959	74	68	66	55	36	83	73	39	72
1960	76	72	69	66	38	82	76	42	77
1961	76	70	62	60	43	86	78	44	78
1962	77	71	62	56	44	86	78	46	81
1963	80	74	68	59	46	89	82	51	83
1964	79	72	59	65	46	91	81	52	81
1965	82	76	70	67	53	89	84	56	85
1966	79	73	70	67	55	91	83	59	83
1967	83	77	79	76	56	94	85	64	86
1968	85	79	75	80	64	94	87	68	89
1969	85	80	78	74	65	95	88	72	91
1970	84	77	71	69	66	99	87	74	88
1971	92	86	92	81	68	100	95	85	96
1972	91	87	88	77	74	101	94	83	99
1973	93	92	91	86	87	99	95	86	99
1974	88	84	74	91	71	100	90	81	88
1975	95	93	91	108	86	95	99	90	96
1976	97	92	96	107	74	99	98	97	94
1977	100	100	100	100	100	100	100	100	100
1978	104	102	108	93	105	101	101	104	105
1979	111	113	116	108	129	104	105	113	113
1980	104	101	97	121	99	108	101	109	100
1981	118	117	121	144	114	109	116	123	115
1982	116	117	122	138	121	107	117	125	116
1983	96	88	67	117	91	109	99	99	100
1984	112	111	116	129	106	107	117	121	112
1985	118	118	134	121	117	110	128	139	120
1986	111	109	123	107	110	110	124	139	116
1987	110	108	106	107	108	113	124	142	123
1988	102	92	73	98	89	116	118	134	107
1989	114	107	108	107	106	116	128	148	119
1990 [p]	117	112	115	138	102	117	....	....	....

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[1] Farm output measures the annual volume of net farm production available for eventual human use through sales from farms or consumption in farm households.

[2] Gross production.

[3] Includes items not included in groups shown.

[4] New survey-based labor productivity time series; not comparable with data published in issues of the *Economic Report of the President* prior to January 1989.

[5] Computed from variable weights for individual crops produced each year.

Source: Department of Agriculture.

TABLE B-97.—*Farm input use, selected inputs, 1947–89*

Year	Farm population, April[1]		Farm employment (thousands)[3]			Crops harvested (millions of acres)[4]	Selected indexes of input use (1977=100)					
	Number (thousands)	As percent of total population[2]	Total	Family workers	Hired workers		Total	Farm labor	Farm real estate	Mechanical power and machinery	Agricultural chemicals[5]	Feed, seed, and livestock purchases[6]
1947	25,829	17.9	10,382	8,115	2,267	355	104	297	106	54	15	51
1948	24,383	16.6	10,363	8,026	2,337	356	104	285	107	62	16	52
1949	24,194	16.2	9,964	7,712	2,252	360	108	285	108	68	18	56
1950	23,048	15.2	9,926	7,597	2,329	345	106	265	109	72	19	58
1951	21,890	14.2	9,546	7,310	2,236	344	106	251	109	77	21	62
1952	21,748	13.9	9,149	7,005	2,144	349	105	237	108	81	23	63
1953	19,874	12.5	8,864	6,775	2,089	348	103	220	108	82	24	63
1954	19,019	11.7	8,651	6,570	2,081	346	102	214	108	82	24	65
1955	19,078	11.5	8,381	6,345	2,036	340	104	220	108	83	26	66
1956	18,712	11.1	7,852	5,900	1,952	324	103	212	106	84	27	69
1957	17,656	10.3	7,600	5,660	1,940	324	100	196	105	83	27	68
1958	17,128	9.8	7,503	5,521	1,982	324	98	182	104	83	28	73
1959	16,592	9.3	7,342	5,390	1,952	324	101	183	105	84	32	77
1960	15,635	8.7	7,057	5,172	1,885	324	99	177	103	83	32	77
1961	14,803	8.1	6,919	5,029	1,890	302	98	167	103	80	35	81
1962	14,313	7.7	6,700	4,873	1,827	295	98	163	104	80	38	83
1963	13,367	7.1	6,518	4,738	1,780	298	98	155	104	79	43	83
1964	12,954	6.7	6,110	4,506	1,604	298	98	148	104	80	46	85
1965	12,363	6.4	5,610	4,128	1,482	298	97	144	103	80	49	86
1966	11,595	5.9	5,214	3,854	1,360	294	96	132	102	82	56	89
1967	10,875	5.5	4,903	3,650	1,253	306	98	128	104	85	66	92
1968	10,454	5.2	4,749	3,535	1,213	300	97	124	102	86	69	89
1969	10,307	5.1	4,596	3,419	1,176	290	96	118	102	86	73	93
1970	9,712	4.7	4,523	3,348	1,175	293	96	112	105	85	75	96
1971	9,425	4.5	4,436	3,275	1,161	305	97	108	103	87	81	102
1972	9,610	4.6	4,373	3,228	1,146	294	97	110	102	86	86	104
1973	9,472	4.5	4,337	3,169	1,168	321	98	109	100	90	90	107
1974	9,264	4.3	4,389	3,075	1,314	328	98	109	99	92	92	99
1975	8,864	4.1	4,342	3,026	1,317	336	97	106	97	96	83	93
1976	8,253	3.8	4,374	2,997	1,377	337	98	100	98	98	96	101
1977	[7] 6,194	[7] 2.8	4,155	2,859	1,296	345	100	100	100	100	100	100
1978	[7] 6,501	[7] 2.9	3,957	2,689	1,268	338	102	100	100	104	107	108
1979	[7] 6,241	[7] 2.8	3,774	2,501	1,273	348	105	99	103	104	123	115
1980	[7] 6,051	[7] 2.7	3,705	2,402	1,303	352	103	96	103	101	123	114
1981	[7] 5,790	[7] 2.5	[8] 3,552	[8] 2,267	[8] 1,285	366	102	96	104	98	129	108
1982	[7] 5,620	[7] 2.4	[8] 3,400	[8] 2,136	[8] 1,264	362	99	93	102	92	118	107
1983	[7] 5,787	[7] 2.5	[8] 3,247	[8] 2,007	[8] 1,240	306	96	97	101	89	102	103
1984	5,754	2.4	[8] 3,094	[8] 1,976	[8] 1,118	348	96	92	99	86	120	106
1985	5,355	2.2	2,941	1,904	1,037	342	92	85	97	80	115	102
1986	5,226	2.2	2,749	1,768	981	325	89	80	96	77	109	110
1987	4,986	2.0	2,734	1,743	992	302	89	78	95	73	111	117
1988	4,951	2.0	2,789	1,810	979	298	87	75	94	72	111	110
1989	4,801	1.9	2,863	1,936	928	318	88	76	93	73	122	119

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[1] Farm population as defined by Department of Agriculture and Department of Commerce, i.e., civilian population living on farms in rural areas, regardless of occupation. See also footnote 7.

[2] Total population of United States including Armed Forces overseas, as of July 1.

[3] Includes persons doing farmwork on all farms. These data, published by the Department of Agriculture, differ from those on agricultural employment by the Department of Labor (see Table B–32) because of differences in the method of approach, in concepts of employment, and in time of month for which the data are collected.

[4] Acreage harvested plus acreages in fruits, tree nuts, and farm gardens.

[5] Fertilizer, lime, and pesticides.

[6] Nonfarm constant dollar value of feed, seed, and livestock purchases.

[7] Based on new definition of a farm. Under old definition of a farm, farm population (in thousands and as percent of total population) for 1977, 1978, 1979, 1980, 1981, 1982, and 1983 is 7,806 and 3.6; 8,005 and 3.6; 7,553 and 3.4; 7,241 and 3.2; 6,942 and 3.0; 6,870 and 3.0; 7,029 and 3.0, respectively.

[8] Basis for farm employment series was discontinued for 1981 through 1984. Employment is estimated for these years.

Note.—Population includes Alaska and Hawaii beginning 1960.

Sources: Department of Agriculture and Department of Commerce (Bureau of the Census).

TABLE B-98.—*Indexes of prices received and prices paid by farmers, 1948–90*

[1977=100]

Year or month	Prices received by farmers			Prices paid by farmers						Addendum: Average farm real estate value per acre[3]
	All farm products	Crops	Livestock and products	All commodities, services, interest, taxes, and wage rates[1]	Production items				Wage rates	
					Total[2]	Tractors and self-propelled machinery	Fertilizer	Fuels and energy		
1948	63	59	65	38	43	....	55	....	23	14
1949	55	52	56	36	41	....	56	....	22	14
1950	56	54	58	37	42	....	54	....	22	14
1951	66	61	70	41	47	....	57	....	25	16
1952	63	62	64	42	47	....	59	....	26	18
1953	56	55	56	40	44	....	59	....	27	18
1954	54	56	52	40	44	....	59	....	27	18
1955	51	53	49	40	43	....	58	....	27	19
1956	50	54	47	40	43	....	57	....	28	19
1957	51	52	51	42	44	....	58	....	29	21
1958	55	52	57	43	46	....	58	....	30	22
1959	53	51	53	43	46	....	57	....	32	23
1960	52	51	53	44	46	....	57	....	33	24
1961	53	52	52	44	46	....	58	....	33	25
1962	53	54	53	45	47	....	58	....	34	26
1963	53	55	51	45	47	....	57	....	35	27
1964	52	55	49	45	47	....	57	....	36	29
1965	54	53	54	47	48	39	57	49	38	31
1966	58	55	60	49	50	40	56	49	41	33
1967	55	52	57	49	50	42	55	50	44	35
1968	56	52	60	51	50	44	52	50	48	38
1969	59	50	67	53	52	47	48	51	53	40
1970	60	52	67	55	54	49	48	52	57	42
1971	62	56	67	58	57	51	50	53	59	43
1972	69	60	77	62	61	54	52	54	63	47
1973	98	91	104	71	73	58	56	57	69	53
1974	105	117	94	81	83	68	92	79	79	66
1975	101	105	98	89	91	82	120	88	85	75
1976	102	102	101	95	97	91	102	93	93	86
1977	100	100	100	100	100	100	100	100	100	100
1978	115	105	124	108	108	109	100	105	107	109
1979	132	116	147	123	125	122	108	137	117	125
1980	134	125	144	138	138	136	134	188	127	145
1981	139	134	143	150	148	152	144	213	138	158
1982	133	121	145	159	153	165	144	210	144	157
1983	135	128	141	161	152	174	137	202	148	148
1984	142	138	146	164	155	181	143	201	151	146
1985	128	120	136	162	151	178	135	200	153	128
1986	123	107	138	159	144	174	124	162	160	112
1987	127	106	146	162	148	174	118	161	167	103
1988	138	126	150	170	157	181	130	166	172	106
1989	147	134	160	178	165	193	137	180	186	112
1990	150	128	171	184	171	202	131	204	192	116
1989: Jan	150	142	158	176	164	188	134	166	186	....
Feb	149	139	159	....	....	....	....	....	....	112
Mar	150	138	161	....	....	....	....	....	....	....
Apr	148	142	155	178	166	192	141	184	186	....
May	149	141	156	....	....	....	....	....	....	....
June	147	137	157	....	....	....	....	....	....	....
July	148	137	157	179	166	192	141	187	189	....
Aug	145	129	161	....	....	....	....	....	....	....
Sept	144	127	160	....	....	....	....	....	....	....
Oct	144	126	162	178	165	199	131	183	179	....
Nov	146	126	165	....	....	....	....	....	....	....
Dec	149	127	169	....	....	....	....	....	....	....
1990: Jan	154	135	172	181	169	199	131	201	193	116
Feb	151	133	169	....	....	....	....	....	....	....
Mar	150	129	171	....	....	....	....	....	....	....
Apr	151	131	170	183	170	201	130	187	193	....
May	154	134	173	....	....	....	....	....	....	....
June	152	130	173	....	....	....	....	....	....	....
July	152	130	173	184	170	201	130	185	192	....
Aug	150	125	174	....	....	....	....	....	....	....
Sept	148	123	173	....	....	....	....	....	....	....
Oct	146	120	171	187	174	208	132	239	186	....
Nov	145	124	166	....	....	....	....	....	....	....
Dec	143	121	166	....	....	....	....	....	....	....

[1] Includes items used for family living, not shown separately.

[2] Includes other items not shown separately.

[3] Average for 48 States. Annual data are for March 1 of each year through 1975, February 1 for 1976–81, April 1 for 1982–85, and February 1 for 1986–89, and January 1 for 1990.

Source: Department of Agriculture.

TABLE B–99.—*U.S. exports and imports of agricultural commodities, 1940–90*

[Billions of dollars]

Year	Exports							Imports					Agricultural trade balance
	Total[1]	Feed grains	Food grains[2]	Oilseeds and products	Cotton	Tobacco	Animals and products	Total[1]	Crops, fruits, and vegetables[3]	Animals and products	Coffee	Cocoa beans and products	
1940	0.5	(4)	(4)	(4)	0.2	(4)	0.1	1.3	(4)	0.2	0.1	(4)	−0.8
1941	.7	(4)	0.1	(4)	.1	0.1	.3	1.7	0.1	.3	.2	(4)	−1.0
1942	1.2	(4)	(4)	(4)	.1	.1	.8	1.3	(4)	.5	.2	(4)	−.1
1943	2.1	(4)	.1	0.1	.2	.2	1.2	1.5	.1	.4	.3	(4)	.6
1944	2.1	(4)	.1	.1	.1	.1	1.3	1.8	.1	.3	.3	(4)	.3
1945	2.3	(4)	.4	(4)	.3	.2	.9	1.7	.1	.4	.3	(4)	.5
1946	3.1	0.1	.7	(4)	.5	.4	.9	2.3	.2	.4	.5	0.1	.8
1947	4.0	.4	1.4	.1	.4	.3	.7	2.8	.1	.4	.6	.2	1.2
1948	3.5	.1	1.5	.2	.5	.2	.5	3.1	.2	.6	.7	.2	.3
1949	3.6	.3	1.1	.3	.9	.3	.4	2.9	.2	.4	.8	.1	.7
1950	2.9	.2	.6	.2	1.0	.3	.3	4.0	.2	.7	1.1	.2	−1.1
1951	4.0	.3	1.1	.3	1.1	.3	.5	5.2	.2	1.1	1.4	.2	−1.1
1952	3.4	.3	1.1	.2	.9	.2	.3	4.5	.2	.7	1.4	.2	−1.1
1953	2.8	.3	.7	.2	.5	.3	.4	4.2	.2	.6	1.5	.2	−1.3
1954	3.1	.2	.5	.3	.8	.3	.5	4.0	.2	.5	1.5	.3	−.9
1955	3.2	.3	.6	.4	.5	.4	.6	4.0	.2	.5	1.4	.2	−.8
1956	4.2	.4	1.0	.5	.7	.3	.7	4.0	.2	.4	1.4	.2	.2
1957	4.5	.3	1.0	.5	1.0	.4	.7	4.0	.2	.5	1.4	.2	.6
1958	3.9	.5	.8	.4	.7	.4	.5	3.9	.2	.7	1.2	.2	(4)
1959	4.0	.6	.9	.6	.4	.3	.6	4.1	.2	.8	1.1	.2	−.1
1960	4.8	.5	1.2	.6	1.0	.4	.6	3.8	.2	.6	1.0	.2	1.0
1961	5.0	.5	1.4	.6	.9	.4	.6	3.7	.2	.7	1.0	.2	1.3
1962	5.0	.8	1.3	.7	.5	.4	.6	3.9	.2	.9	1.0	.2	1.2
1963	5.6	.8	1.5	.8	.6	.4	.7	4.0	.3	.9	1.0	.2	1.6
1964	6.3	.9	1.7	1.0	.7	.4	.8	4.1	.3	.8	1.2	.2	2.3
1965	6.2	1.1	1.4	1.2	.5	.4	.8	4.1	.3	.9	1.1	.1	2.1
1966	6.9	1.3	1.8	1.2	.4	.5	.7	4.5	.4	1.2	1.1	.1	2.4
1967	6.4	1.1	1.5	1.3	.5	.5	.7	4.5	.4	1.1	1.0	.2	1.9
1968	6.3	.9	1.4	1.3	.5	.5	.7	5.0	.5	1.3	1.2	.2	1.3
1969	6.0	.9	1.2	1.3	.3	.6	.8	5.0	.5	1.4	.9	.2	1.1
1970	7.3	1.1	1.4	1.9	.4	.5	.9	5.8	.5	1.6	1.2	.3	1.5
1971	7.7	1.0	1.3	2.2	.6	.5	1.0	5.8	.6	1.5	1.2	.2	1.9
1972	9.4	1.5	1.8	2.4	.5	.7	1.1	6.5	.7	1.8	1.3	.2	2.9
1973	17.7	3.5	4.7	4.3	.9	.7	1.6	8.4	.8	2.6	1.7	.3	9.3
1974	21.9	4.6	5.4	5.7	1.3	.8	1.8	10.2	.8	2.2	1.6	.5	11.7
1975	21.9	5.2	6.2	4.5	1.0	.9	1.7	9.3	.8	1.8	1.7	.5	12.6
1976	23.0	6.0	4.7	5.1	1.0	.9	2.4	11.0	.9	2.3	2.9	.6	12.0
1977	23.6	4.9	3.6	6.6	1.5	1.1	2.7	13.4	1.2	2.3	4.2	1.0	10.2
1978	29.4	5.9	5.5	8.2	1.7	1.4	3.0	14.8	1.5	3.1	4.0	1.4	14.6
1979	34.7	7.7	6.3	8.9	2.2	1.2	3.8	16.7	1.7	3.9	4.2	1.2	18.0
1980	41.2	9.8	7.9	9.4	2.9	1.3	3.8	17.4	1.6	3.8	4.2	.9	23.9
1981	43.3	9.4	9.6	9.6	2.3	1.5	4.2	16.8	2.0	3.5	2.9	.9	26.6
1982	36.6	6.4	7.9	9.1	2.0	1.5	3.9	15.4	2.3	3.7	2.9	.7	21.2
1983	36.1	7.3	7.4	8.7	1.8	1.5	3.8	16.6	2.3	3.8	2.8	.8	19.5
1984	37.8	8.1	7.5	8.4	2.4	1.5	4.2	19.3	3.1	4.1	3.3	1.1	18.5
1985	29.0	6.0	4.5	5.8	1.6	1.5	4.1	20.0	3.5	4.2	3.3	1.4	9.1
1986	26.2	3.1	3.8	6.5	.8	1.2	4.5	21.5	3.6	4.5	4.6	1.1	4.7
1987	28.7	3.8	3.8	6.4	1.6	1.1	5.2	20.4	3.6	4.9	2.9	1.2	8.3
1988	37.1	5.9	5.9	7.7	2.0	1.3	6.4	21.0	3.8	5.2	2.5	1.0	16.1
1989	40.0	7.7	7.1	6.3	2.3	1.3	6.4	21.8	4.2	5.1	2.4	1.0	18.2
Jan–Nov:													
1989	36.4	6.9	6.6	5.7	2.0	1.2	5.8	20.0	3.9	4.6	2.3	.9	16.4
1990	36.2	6.6	4.5	5.2	2.5	1.2	6.1	20.9	4.5	5.1	1.8	1.0	15.3

[1] Total includes items not shown separately.

[2] Rice, wheat, and wheat flour.

[3] Includes nuts, fruits, and vegetable preparations.

[4] Less than $50 million.

Note.—Data derived from official estimates released by the Bureau of the Census, Department of Commerce. Agricultural commodities are defined as (1) nonmarine food products and (2) other products of agriculture which have not passed through complex processes of manufacture. Export value, at U.S. port of exportation, is based on the selling price and includes inland freight, insurance, and other charges to the port. Import value, defined generally as the market value in the foreign country, excludes import duties, ocean freight, and marine insurance.

Source: Department of Agriculture.

TABLE B–100.—*Balance sheet of the farm sector, 1939–90*

[Billions of dollars]

End of year	Assets									Claims			
	Total assets	Physical assets						Financial assets		Total claims	Real estate debt [5]	Nonreal estate debt [6]	Proprietors' equity
		Real estate	Nonreal estate										
			Livestock [1]	Machinery and motor vehicles	Crops [2]	Purchased inputs [3]	Household equipment and furnishings	Investments in cooperatives	Other [4]				
1939	52.6	33.6	5.1	3.1	2.2	....	4.2	.8	3.5	52.6	6.6	3.0	43.0
1940	53.7	34.0	5.3	3.3	2.3	....	4.1	.9	3.9	53.7	6.5	3.3	43.8
1941	61.4	36.6	7.1	4.0	3.2	....	4.8	.9	4.7	61.4	6.4	3.5	51.5
1942	72.9	41.5	9.6	4.9	4.3	....	4.8	1.0	6.5	72.9	6.0	3.2	63.7
1943	82.9	47.7	9.7	5.4	5.5	....	4.7	1.1	8.8	82.9	5.4	2.9	74.5
1944	92.1	52.9	9.0	6.5	6.0	....	5.2	1.2	11.3	92.1	4.9	2.7	84.4
1945	102.1	60.5	9.7	5.4	6.0	....	5.6	1.4	13.5	102.1	4.8	2.9	94.5
1946	116.1	68.7	11.9	5.3	7.0	....	7.2	1.5	14.4	116.1	4.9	3.5	107.7
1947	127.1	73.5	13.3	7.4	8.9	....	8.1	1.7	14.3	127.1	5.1	4.1	118.0
1948	132.9	76.0	14.4	10.1	7.4	....	8.9	1.9	14.2	132.9	5.3	4.9	122.7
1949	130.3	75.1	12.9	12.2	5.9	....	8.4	2.1	13.8	130.3	5.6	5.2	119.6
1950	152.9	88.9	17.1	14.1	7.1	....	9.6	2.3	13.8	152.9	6.1	6.1	140.7
1951	169.7	98.7	19.5	16.7	8.2	....	10.0	2.5	14.1	169.7	6.7	7.4	155.6
1952	166.4	100.0	14.8	17.4	7.9	....	9.6	2.7	14.1	166.4	7.3	7.7	151.5
1953	162.4	98.9	11.7	18.4	6.8	....	9.5	2.9	14.2	162.4	7.8	6.8	147.8
1954	167.0	102.5	11.2	18.7	7.5	....	9.7	3.0	14.4	167.0	8.3	7.2	151.5
1955	172.5	108.2	10.6	19.3	6.5	....	10.0	3.2	14.6	172.5	9.0	7.9	155.5
1956	181.7	116.1	11.0	20.2	6.8	....	9.6	3.5	14.4	181.7	9.9	8.0	163.9
1957	191.0	122.7	13.9	20.1	6.4	....	9.6	3.7	14.6	191.0	10.4	8.8	171.8
1958	206.4	131.5	17.7	21.8	6.9	....	9.4	3.9	15.1	206.4	11.1	10.1	185.2
1959	210.3	138.4	15.2	22.7	6.6	....	9.2	4.2	13.8	210.3	12.1	11.5	186.6
1960	210.7	139.7	15.6	22.2	6.7	....	8.7	4.5	13.3	210.7	12.9	12.0	185.9
1961	218.8	145.8	16.4	22.5	7.0	....	8.9	4.8	13.3	218.8	14.0	12.7	192.1
1962	226.9	151.5	17.3	23.5	7.3	....	8.8	5.0	13.6	226.9	15.2	14.2	197.5
1963	235.0	159.7	15.9	23.9	7.9	....	8.8	5.4	13.5	235.0	16.9	15.6	202.5
1964	243.6	168.7	14.5	24.8	7.7	....	8.4	5.6	13.8	243.6	18.9	16.4	208.2
1965	261.0	180.8	17.6	26.0	8.3	....	8.4	5.9	14.1	261.0	21.2	18.1	221.7
1966	274.8	190.7	19.0	27.4	8.9	....	8.3	6.2	14.2	274.8	23.1	19.8	231.9
1967	288.2	201.4	18.8	29.8	8.3	....	8.8	6.4	14.7	288.2	25.2	20.8	242.2
1968	301.9	211.0	20.2	31.3	8.1	....	9.4	6.7	15.2	301.9	27.5	20.4	254.0
1969	312.7	217.1	23.5	32.3	8.4	....	9.6	6.2	15.6	312.7	29.4	21.2	262.2
1970	324.0	224.5	23.7	34.4	8.4	....	10.0	7.0	16.0	324.0	30.5	22.3	271.3
1971	350.3	240.9	27.3	36.7	10.0	....	10.8	7.8	16.8	350.3	32.4	25.1	292.8
1972	393.3	268.7	33.7	39.3	13.0	....	11.9	8.7	18.0	393.3	35.4	28.0	329.9
1973	478.3	329.2	42.4	44.2	21.5	....	12.3	9.8	19.0	478.3	39.8	33.1	405.5
1974 [7]	512.9	369.5	24.6	53.6	23.1	....	14.0	10.3	17.8	512.9	44.9	36.7	431.3
1975	579.2	421.0	29.4	63.1	21.2	....	14.2	12.0	18.4	579.2	49.9	41.6	487.7
1976	667.6	499.8	29.0	70.1	21.5	....	15.2	13.3	18.7	667.6	55.4	47.8	564.5
1977	736.3	556.5	31.9	76.4	21.8	....	17.2	13.5	19.0	736.3	63.9	55.0	617.4
1978	863.3	656.0	50.1	76.4	25.0	....	20.0	16.1	19.7	863.3	72.8	63.8	726.7
1979	1,000.1	767.8	61.4	82.9	28.4	....	21.5	18.1	19.9	1,000.1	86.8	75.7	837.6
1980	1,088.2	850.1	60.6	86.9	31.9	....	19.4	19.3	20.0	1,088.2	97.5	81.2	909.5
1981	1,088.4	851.7	53.5	92.5	29.0	....	20.8	20.6	20.3	1,088.4	107.2	88.2	893.0
1982	1,049.0	812.2	53.0	92.6	26.1	....	23.0	21.2	20.9	1,049.0	111.3	91.8	845.9
1983	1,056.4	821.8	49.5	92.1	24.0	....	24.4	22.8	21.8	1,056.4	113.7	92.7	850.0
1984	969.2	727.7	49.5	91.1	26.2	2.6	24.3	24.3	23.4	969.2	112.3	92.0	764.8
1985	885.8	650.0	46.3	88.3	22.9	1.3	27.8	24.3	25.0	885.8	105.7	82.2	697.9
1986	841.0	606.0	47.8	86.1	16.7	2.0	28.7	24.4	29.4	841.0	95.9	70.8	674.4
1987	886.8	633.5	58.0	84.5	18.0	3.3	32.9	25.3	31.4	886.8	87.7	66.0	733.1
1988	938.5	665.8	65.5	85.7	23.0	3.4	37.0	25.1	32.9	938.5	83.0	65.6	790.0
1989	972.2	688.1	69.7	88.2	23.5	2.8	41.3	26.1	32.5	972.2	80.5	65.5	826.3
1990 [p]	1,005.0	710.0	74.0	91.0	23.0	3.0	45.0	26.0	33.0	1,005.0	79.0	65.0	861.0

[1] Beginning with 1959, horses and mules are excluded.

[2] Non-Commodity Credit Corporation (CCC) crops held on farms plus value above loan rate for crops held under CCC.

[3] Includes fertilizer, chemicals, fuels, parts, feed, seed, and other supplies.

[4] Sum of currency, demand deposits, time deposits, and U.S. savings bonds.

[5] Includes CCC storage and drying facilities loans.

[6] Does not include CCC crop loans.

[7] Beginning 1974, data are for farms included in the new farm definition, that is, places with sales of $1,000 or more annually.

Note.—Data include operator households.

Beginning 1959, data include Alaska and Hawaii.

Source: Department of Agriculture.

TABLE B–101.—*International investment position of the United States at year-end, 1982–89*

[Billions of dollars]

Type of investment	Type of valuation	1982	1983	1984	1985	1986	1987	1988	1989
U.S. ASSETS ABROAD:									
U.S. official reserve assets	Current	34.0	33.7	34.9	43.2	48.5	45.8	47.8	74.6
Gold	Historical	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
Special drawing rights	Current	5.3	5.0	5.6	7.3	8.4	10.3	9.6	10.0
Reserve position in the International Monetary Fund	Current	7.3	11.3	11.5	11.9	11.7	11.3	9.7	9.0
Foreign currencies	Current	10.2	6.3	6.7	12.9	17.3	13.1	17.4	44.6
U.S. Government assets, other than official reserve assets	Historical	74.6	79.5	84.9	87.7	89.6	88.6	85.6	84.3
U.S. loans and other long-term assets	Historical	72.9	77.8	82.9	85.8	88.7	87.6	84.9	83.8
Repayable in dollars	Historical	70.9	76.0	81.1	84.1	87.1	86.0	83.4	82.4
Other	Historical	1.9	1.8	1.8	1.7	1.6	1.6	1.5	1.5
U.S. foreign currency holdings and U.S. short-term assets	Historical	1.7	1.7	2.0	1.9	.9	.9	.7	.5
U.S. private assets:									
Direct investment abroad	Historical	207.8	207.2	211.5	230.3	259.8	314.3	333.5	373.4
Foreign securities	Current	75.3	83.4	88.9	112.2	131.7	146.7	156.8	189.6
Bonds	Current	56.7	57.5	61.9	72.9	81.7	92.0	94.0	98.5
Corporate stocks	Current	18.6	25.9	27.0	39.3	50.0	54.7	62.7	91.1
U.S. claims on unaffiliated foreigners reported by U.S. nonbanking concerns	Historical	28.6	35.1	30.1	29.0	36.4	31.1	33.9	32.5
U.S. claims reported by U.S. banks, not included elsewhere	Historical	404.6	434.5	445.6	447.4	507.3	549.5	608.0	658.0
FOREIGN ASSETS IN THE UNITED STATES:									
Foreign official assets in the United States	Current	189.1	194.5	199.7	202.5	241.2	282.9	321.6	337.2
U.S. Government securities	Current	132.6	137.0	144.7	145.1	178.9	220.5	260.9	265.9
U.S. Treasury securities	Current	124.9	129.7	138.2	138.4	173.3	213.7	253.0	256.3
Other	Current	7.7	7.3	6.5	6.6	5.6	6.8	8.0	9.6
Other U.S. Government liabilities	Historical	13.6	14.2	15.0	15.9	18.0	15.5	14.8	15.1
U.S. liabilities reported by U.S. banks, not included elsewhere	Historical	25.0	25.5	26.1	26.7	27.9	31.8	31.5	36.5
Other foreign official assets	Current	17.9	17.7	14.0	14.9	16.4	15.0	14.4	19.7
Other foreign assets in the United States:									
Direct investment in the United States	Historical	124.7	137.1	164.6	184.6	220.4	271.8	328.9	400.8
U.S. Treasury securities	Current	25.8	33.8	62.1	88.0	96.1	82.6	100.9	134.8
U.S. securities other than U.S. Treasury securities	Current	93.0	113.8	128.5	207.9	310.9	346.2	395.6	489.8
Corporate and other bonds	Current	16.7	17.5	32.4	82.3	141.9	170.5	194.6	229.6
Corporate stocks	Current	76.3	96.4	96.1	125.6	168.9	175.6	201.0	260.2
U.S. liabilities to unaffiliated foreigners reported by U.S. nonbanking concerns	Historical	27.5	26.9	31.0	29.5	26.9	29.8	36.0	38.9
U.S. liabilities reported by U.S. banks, not included elsewhere	Historical	228.0	278.3	312.2	354.5	451.6	540.7	613.7	674.8

Note.—In June 1990, the Bureau of Economic Analysis suspended showing estimates of the net international investment position and of total U.S. assets abroad and foreign assets in the United States, inasmuch as some components are valued in current-period prices and others are valued in prices of earlier periods.

The second column here shows the valuation used for each component; since some components reflect a mix of valuations for their subcomponents, the valuation basis shown reflects that used for the major part of the category.

For further details, including plans for developing new estimates, see *Survey of Current Business*, June 1990.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–102.—*U.S. international transactions, 1946–90*

[Millions of dollars; quarterly data seasonally adjusted, except as noted. Credits (+), debits (−)]

Year or quarter	Merchandise [1] [2]			Services			Investment income [5]			Balance on goods, services, and income [4]	Unilateral transfers, net [4]	Balance on current account
	Exports	Imports	Net	Net military transactions [3] [4]	Net travel and transportation receipts	Other services, net [5]	Receipts on U.S. assets abroad	Payments on foreign assets in U.S. [3]	Net			
1946	11,764	−5,067	6,697	−493	733	310	772	−212	560	7,807	−2,922	4,885
1947	16,097	−5,973	10,124	−455	946	145	1,102	−245	857	11,617	−2,625	8,992
1948	13,265	−7,557	5,708	−799	374	175	1,921	−437	1,484	6,942	−4,525	2,417
1949	12,213	−6,874	5,339	−621	230	208	1,831	−476	1,355	6,511	−5,638	873
1950	10,203	−9,081	1,122	−576	−120	242	2,068	−559	1,509	2,177	−4,017	−1,840
1951	14,243	−11,176	3,067	−1,270	298	254	2,633	−583	2,050	4,399	−3,515	884
1952	13,449	−10,838	2,611	−2,054	83	309	2,751	−555	2,196	3,145	−2,531	614
1953	12,412	−10,975	1,437	−2,423	−238	307	2,736	−624	2,112	1,195	−2,481	−1,286
1954	12,929	−10,353	2,576	−2,460	−269	305	2,929	−582	2,347	2,499	−2,280	219
1955	14,424	−11,527	2,897	−2,701	−297	299	3,406	−676	2,730	2,928	−2,498	430
1956	17,556	−12,803	4,753	−2,788	−361	447	3,837	−735	3,102	5,153	−2,423	2,730
1957	19,562	−13,291	6,271	−2,841	−189	482	4,180	−796	3,384	7,107	−2,345	4,762
1958	16,414	−12,952	3,462	−3,135	−633	486	3,790	−825	2,965	3,145	−2,361	784
1959	16,458	−15,310	1,148	−2,805	−821	573	4,132	−1,061	3,071	1,166	−2,448	−1,282
1960	19,650	−14,758	4,892	−1,057	−964	639	4,616	−1,238	3,379	6,886	−4,062	2,824
1961	20,108	−14,537	5,571	−1,131	−978	732	4,999	−1,245	3,755	7,949	−4,127	3,822
1962	20,781	−16,260	4,521	−912	−1,152	912	5,618	−1,324	4,294	7,664	−4,277	3,387
1963	22,272	−17,048	5,224	−742	−1,309	1,036	6,157	−1,560	4,596	8,806	−4,392	4,414
1964	25,501	−18,700	6,801	−794	−1,146	1,161	6,824	−1,783	5,041	11,063	−4,240	6,823
1965	26,461	−21,510	4,951	−487	−1,280	1,480	7,437	−2,088	5,350	10,014	−4,583	5,431
1966	29,310	−25,493	3,817	−1,043	−1,331	1,497	7,528	−2,481	5,047	7,987	−4,955	3,031
1967	30,666	−26,866	3,800	−1,187	−1,750	1,742	8,021	−2,747	5,274	7,878	−5,294	2,583
1968	33,626	−32,991	635	−596	−1,548	1,759	9,367	−3,378	5,990	6,240	−5,629	611
1969	36,414	−35,807	607	−718	−1,763	1,964	10,913	−4,869	6,044	6,135	−5,735	399
1970	42,469	−39,866	2,603	−641	−2,038	2,330	11,748	−5,515	6,233	8,486	−6,156	2,331
1971	43,319	−45,579	−2,260	653	−2,345	2,649	12,707	−5,435	7,272	5,969	−7,402	−1,433
1972	49,381	−55,797	−6,416	1,072	−3,063	2,965	14,765	−6,572	8,192	2,749	−8,544	−5,795
1973	71,410	−70,499	911	740	−3,158	3,406	21,808	−9,655	12,153	14,053	−6,913	7,140
1974	98,306	−103,811	−5,505	165	−3,184	4,231	27,587	−12,084	15,503	11,210	[6] −9,249	1,962
1975	107,088	−98,185	8,903	1,461	−2,812	4,854	25,351	−12,564	12,787	25,191	−7,075	18,116
1976	114,745	−124,228	−9,483	931	−2,558	5,027	29,286	−13,311	15,975	9,894	−5,686	4,207
1977	120,816	−151,907	−31,091	1,731	−3,565	5,680	32,178	−14,217	17,961	−9,285	−5,226	−14,511
1978	142,054	−176,001	−33,947	857	−3,573	6,879	41,824	−21,680	20,144	−9,639	−5,788	−15,427
1979	184,473	−212,009	−27,536	−1,313	−2,935	7,251	63,096	−32,961	30,136	5,603	−6,593	−991
1980	224,269	−249,750	−25,481	−1,822	−997	8,912	71,388	−42,532	28,856	9,467	−8,349	1,119
1981	237,085	−265,063	−27,978	−844	144	12,552	84,975	−53,626	31,349	15,223	−8,331	6,892
1982	211,198	−247,642	−36,444	112	−992	12,981	85,346	−57,097	28,250	3,907	−9,775	−5,868
1983	201,820	−268,900	−67,080	−163	−4,227	13,859	81,972	−54,549	27,423	−30,188	−9,956	−40,143
1984	219,900	−332,422	−112,522	−2,147	−9,153	14,042	92,935	−69,542	23,394	−86,385	−12,621	−99,006
1985	215,935	−338,083	−122,148	−4,096	−10,788	14,008	82,282	−66,115	16,166	−106,859	−15,473	−122,332
1986	223,367	−368,425	−145,058	−4,907	−8,939	18,551	80,982	−70,013	10,969	−129,384	−16,009	−145,393
1987	250,266	−409,766	−159,500	−3,530	−8,298	18,262	90,536	−85,210	5,326	−147,739	−14,575	−162,314
1988	320,337	−447,323	−126,986	−5,452	−4,060	21,032	110,048	−108,438	1,610	−113,857	−15,005	−128,862
1989	360,465	−475,329	−114,864	−6,320	659	26,123	127,536	−128,448	−913	−95,314	−14,720	−110,034
1988:												
I	76,497	−109,988	−33,491	−1,075	−1,776	4,736	26,980	−24,580	2,400	−29,206	−3,476	−32,682
II	79,392	−110,494	−31,102	−1,139	−1,062	5,079	26,739	−26,330	409	−27,815	−3,060	−30,875
III	80,511	−111,290	−30,779	−1,144	−624	5,391	27,942	−28,083	−141	−27,297	−3,461	−30,758
IV	83,937	−115,551	−31,614	−2,094	−599	5,829	28,386	−29,445	−1,059	−29,537	−5,008	−34,545
1989:												
I	88,267	−116,360	−28,093	−1,763	−57	5,899	30,872	−30,407	465	−23,549	−3,555	−27,104
II	91,111	−119,333	−28,222	−1,667	39	6,164	31,932	−33,889	−1,957	−25,643	−3,006	−28,649
III	89,349	−119,152	−29,803	−1,114	−192	7,031	32,102	−32,085	17	−24,061	−3,530	−27,591
IV	91,738	−120,484	−28,746	−1,776	870	7,030	32,629	−32,068	561	−22,061	−4,631	−26,692
1990:												
I	96,262	−122,545	−26,283	−1,287	1,075	6,217	31,541	−29,546	1,995	−18,283	−3,385	−21,668
II	96,758	−119,860	−23,102	−1,382	479	6,885	30,682	−31,681	−999	−18,119	−4,366	−22,485
III [p]	96,159	−125,911	−29,752	−1,648	350	7,115	33,082	−30,627	2,455	−21,480	−4,105	−25,585

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[1] Excludes military.

[2] Adjusted from Census data for differences in valuation, coverage, and timing.

[3] Quarterly data are not seasonally adjusted.

[4] Beginning 1960, includes transfers of goods and services under U.S. military grant programs.

[5] Fees and royalties from U.S. direct investments abroad or from foreign direct investments in the United States are excluded from investment income and included in other services, net.

See next page for continuation of table.

TABLE B-102.—*U.S. international transactions, 1946–90*—Continued

[Millions of dollars; quarterly data seasonally adjusted, except as noted]

Year or quarter	U.S. assets abroad, net [increase/capital outflow (−)]				Foreign assets in the U.S., net [increase/capital inflow (+)] [3]			Allocations of special drawing rights (SDRs)	Statistical discrepancy	
	Total	U.S. official reserve assets [3] [7]	Other U.S. Government assets	U.S. private assets	Total	Foreign official assets	Other foreign assets		Total (sum of the items with sign reversed)	Of which: Seasonal adjustment discrepancy
1946	....	−623	....	....	....	....	....	....	....	....
1947	....	−3,315	....	....	....	....	....	....	....	....
1948	....	−1,736	....	....	....	....	....	....	....	....
1949	....	−266	....	....	....	....	....	....	....	....
1950	....	1,758	....	....	....	....	....	....	....	....
1951	....	−33	....	....	....	....	....	....	....	....
1952	....	−415	....	....	....	....	....	....	....	....
1953	....	1,256	....	....	....	....	....	....	....	....
1954	....	480	....	....	....	....	....	....	....	....
1955	....	182	....	....	....	....	....	....	....	....
1956	....	−869	....	....	....	....	....	....	....	....
1957	....	−1,165	....	....	....	....	....	....	....	....
1958	....	2,292	....	....	....	....	....	....	....	....
1959	....	1,035	....	....	....	....	....	....	....	....
1960	−4,099	2,145	−1,100	−5,144	2,294	1,473	821	....	−1,019	....
1961	−5,538	607	−910	−5,235	2,705	765	1,939	....	−989	....
1962	−4,174	1,535	−1,085	−4,623	1,911	1,270	641	....	−1,124	....
1963	−7,270	378	−1,662	−5,986	3,217	1,986	1,231	....	−360	....
1964	−9,560	171	−1,680	−8,050	3,643	1,660	1,983	....	−907	....
1965	−5,716	1,225	−1,605	−5,336	742	134	607	....	−457	....
1966	−7,321	570	−1,543	−6,347	3,661	−672	4,333	....	629	....
1967	−9,757	53	−2,423	−7,386	7,379	3,451	3,928	....	−205	....
1968	−10,977	−870	−2,274	−7,833	9,928	−774	10,703	....	438	....
1969	−11,585	−1,179	−2,200	−8,206	12,702	−1,301	14,002	....	−1,516	....
1970	−9,337	2,481	−1,589	−10,229	6,359	6,908	−550	867	−219	....
1971	−12,475	2,349	−1,884	−12,940	22,970	26,879	−3,909	717	−9,779	....
1972	−14,497	−4	−1,568	−12,925	21,461	10,475	10,986	710	−1,879	....
1973	−22,874	158	−2,644	−20,388	18,388	6,026	12,362	....	−2,654	....
1974	−34,745	−1,467	[6] 366	−33,643	34,241	10,546	23,696	....	−1,458	....
1975	−39,703	−849	−3,474	−35,380	15,670	7,027	8,643	....	5,917	....
1976	−51,269	−2,558	−4,214	−44,498	36,518	17,693	18,826	....	10,544	....
1977	−34,785	−375	−3,693	−30,717	51,319	36,816	14,503	....	−2,023	....
1978	−61,130	732	−4,660	−57,202	64,036	33,678	30,358	....	12,521	....
1979	−64,331	−1,133	−3,746	−59,453	38,752	−13,665	52,416	1,139	25,431	....
1980	−86,118	−8,155	−5,162	−72,802	58,112	15,497	42,615	1,152	25,736	....
1981	−110,951	−5,175	−5,097	−100,679	83,032	4,960	78,072	1,093	19,934	....
1982	−124,490	−4,965	−6,131	−113,394	93,746	3,593	90,154	....	36,612	....
1983	−56,100	−1,196	−5,006	−49,898	84,869	5,845	79,023	....	11,374	....
1984	−31,070	−3,131	−5,489	−22,451	102,621	3,140	99,481	....	27,456	....
1985	−27,721	−3,858	−2,821	−21,043	130,012	−1,083	131,096	....	20,041	....
1986	−92,030	312	−2,022	−90,321	221,599	35,588	186,011	....	15,824	....
1987	−62,946	9,149	997	−73,091	218,470	45,210	173,260	....	6,790	....
1988	−84,176	−3,912	2,969	−83,232	221,442	39,515	181,927	....	−8,404	....
1989	−127,061	−25,293	1,185	−102,953	214,652	8,823	205,829	....	22,443	....
1988: I	4,569	1,502	−1,594	4,661	26,079	24,840	1,239	....	2,034	2,970
II	−19,856	39	−847	−19,048	65,270	5,970	59,300	....	−14,539	−2,995
III	−42,383	−7,380	1,957	−36,960	49,797	−2,015	51,812	....	23,344	−4,630
IV	−26,508	1,925	3,452	−31,885	80,295	10,720	69,575	....	−19,242	4,656
1989: I	−32,859	−4,000	962	−29,821	68,402	7,797	60,605	....	−8,439	3,093
II	−1,381	−12,095	−303	11,017	2,794	−4,961	7,755	....	27,236	−1,697
III	−44,076	−5,996	574	−38,654	74,136	13,003	61,133	....	−2,469	−4,953
IV	−48,745	−3,202	−47	−45,496	69,320	−7,016	76,336	....	5,117	3,560
1990: I	32,877	−3,177	−659	36,713	−32,988	−8,203	−24,786	....	21,780	2,804
II	−31,721	371	−808	−31,284	25,496	5,541	19,954	....	28,711	−988
III [p]	−26,451	1,739	−379	−27,811	52,471	13,642	38,829	....	−435	−5,303

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[6] Includes extraordinary U.S. Government transactions with India.

[7] Consists of gold, special drawing rights, foreign currencies, and the U.S. reserve position in the International Monetary Fund (IMF).

Note.—*See Survey of Current Business*, June 1990, for discussion of redefinitions and other adjustments to data, as well as relationship of data shown here with data in the national income and product accounts.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–103.—*U.S. merchandise exports and imports by principal end-use category, 1965–90*

[Billions of dollars; quarterly data seasonally adjusted]

Year or quarter	Exports							Imports						
	Total	Agricultural products	Nonagricultural products					Total	Petroleum and products	Nonpetroleum products				
			Total	Industrial supplies and materials	Capital goods except automotive	Automotive	Other			Total	Industrial supplies and materials	Capital goods except automotive	Automotive	Other
1965	26.5	6.3	20.2	7.6	8.1	1.9	2.6	21.5	2.0	19.5	9.1	1.5	0.9	8.0
1966	29.3	6.9	22.4	8.2	8.9	2.4	2.9	25.5	2.1	23.4	10.2	2.2	1.8	9.2
1967	30.7	6.5	24.2	8.5	9.9	2.8	3.0	26.9	2.1	24.8	10.0	2.5	2.4	9.9
1968	33.6	6.3	27.3	9.6	11.1	3.5	3.2	33.0	2.4	30.6	12.0	2.8	4.0	11.8
1969	36.4	6.1	30.3	10.4	12.4	3.9	3.7	35.8	2.6	33.2	11.7	3.4	5.1	13.0
1970	42.5	7.4	35.1	12.3	14.7	3.9	4.3	39.9	2.9	36.9	12.3	4.0	5.7	15.0
1971	43.3	7.8	35.5	10.9	15.4	4.7	4.5	45.6	3.6	41.9	13.6	4.3	7.6	16.5
1972	49.4	9.5	39.9	11.8	16.9	5.5	5.6	55.8	4.7	51.1	16.0	5.9	9.0	20.2
1973	71.4	18.0	53.4	16.9	22.0	7.0	7.6	70.5	8.4	62.1	19.2	8.3	10.7	23.9
1974	98.3	22.4	75.9	26.2	30.9	8.8	10.0	103.8	26.6	77.2	27.4	9.8	12.4	27.5
1975	107.1	22.2	84.8	26.7	36.6	10.8	10.7	98.2	27.0	71.2	23.6	10.2	12.1	25.3
1976	114.7	23.4	91.4	28.3	39.1	12.2	11.7	124.2	34.6	89.7	29.1	12.3	16.8	31.4
1977	120.8	24.3	96.5	29.7	39.8	13.5	13.5	151.9	45.0	106.9	35.0	14.0	19.4	38.6
1978 [1]	142.1	29.9	112.2	34.0	47.3	15.7	15.2	176.0	42.6	133.4	40.6	19.4	25.0	48.4
1979	184.5	35.6	148.9	52.1	60.0	18.3	18.5	212.0	61.0	151.1	47.5	24.5	26.5	52.6
1980	224.3	42.2	182.1	65.3	76.3	17.4	23.2	249.8	79.4	170.4	52.9	31.4	28.1	58.0
1981	237.1	44.0	193.0	63.8	83.9	19.7	25.6	265.1	78.6	186.5	56.4	36.9	30.9	62.3
1982	211.2	37.2	174.0	58.0	76.0	17.4	22.5	247.6	62.0	185.6	48.9	38.4	34.0	64.3
1983	201.8	37.1	164.7	52.9	71.3	18.6	21.8	268.9	55.3	213.6	53.9	43.2	43.2	73.3
1984	219.9	38.4	181.5	56.8	77.0	22.6	25.1	332.4	58.0	274.4	66.0	60.5	56.6	91.4
1985	215.9	29.6	186.4	54.8	79.6	25.1	26.8	338.1	51.3	286.8	62.4	61.4	65.1	97.9
1986	223.4	27.4	196.0	59.4	82.9	25.3	28.3	368.4	34.4	334.0	69.9	72.1	78.1	113.9
1987	250.3	29.5	220.7	63.6	92.4	28.1	36.6	409.8	42.9	366.8	70.8	85.1	85.2	125.7
1988	320.3	38.2	282.1	82.6	119.0	33.9	46.6	447.3	39.6	407.7	83.1	102.2	87.9	134.5
1989	360.5	41.5	319.0	90.6	138.0	34.7	55.7	475.3	50.9	424.4	84.1	113.1	86.0	141.3
1988:														
I	76.5	8.9	67.6	20.2	28.4	8.4	10.6	110.0	10.0	100.0	20.9	24.1	21.6	33.4
II	79.4	9.3	70.1	20.9	29.3	8.4	11.5	110.5	10.3	100.2	21.1	25.4	21.4	32.3
III	80.5	10.1	70.4	20.6	29.5	8.3	12.0	111.3	9.9	101.4	20.1	25.8	21.9	33.5
IV	83.9	9.8	74.1	21.0	31.8	8.8	12.5	115.6	9.5	106.1	20.9	26.9	23.0	35.2
1989:														
I	88.3	10.6	77.6	22.2	33.0	9.0	13.5	116.4	10.9	105.5	21.3	27.2	22.8	34.1
II	91.1	10.7	80.4	23.5	34.6	8.6	13.8	119.3	13.5	105.8	21.3	28.5	21.1	34.9
III	89.3	9.9	79.4	22.6	35.3	8.2	13.3	119.2	13.2	106.0	20.6	28.3	21.3	35.7
IV	91.7	10.2	81.5	22.2	35.2	8.9	15.2	120.5	13.3	107.2	20.8	29.1	20.7	36.5
1990:														
I	96.3	11.0	85.3	23.6	38.2	8.7	14.9	122.5	15.6	107.0	20.1	28.9	21.0	37.0
II	96.8	10.3	86.4	23.2	38.6	9.6	14.9	119.9	12.2	107.7	20.6	28.9	21.2	37.0
III [p]	96.2	9.7	86.4	23.8	38.0	9.0	15.6	125.9	15.7	110.2	20.8	29.2	22.6	37.6

[1] End-use categories beginning 1978 are not strictly comparable with data for earlier periods. See *Survey of Current Business*, June 1988.

Note.—Data are on an international transactions basis and exclude military.

In June 1990, end-use categories for merchandise exports were redefined to include reexports; beginning with data for 1978 reexports (exports of foreign merchandise) are now assigned to detailed end-use categories in the same manner as exports of domestic merchandise.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-104.—*U.S. merchandise exports and imports by area, 1981–90*

[Billions of dollars]

Item	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990 first 3 quarters at annual rate [1]
Exports	237.1	211.2	201.8	219.9	215.9	223.4	250.3	320.3	360.5	385.6
Industrial countries	141.9	127.3	128.4	141.0	140.5	150.3	165.6	207.3	232.8	251.2
Canada	46.0	39.2	44.5	53.0	55.4	56.5	62.0	74.3	79.7	84.0
Japan	21.8	20.7	21.8	23.2	22.1	26.4	27.6	37.2	43.7	47.0
Western Europe	65.1	59.7	55.4	56.9	56.0	60.4	68.6	86.4	98.5	109.2
Australia, New Zealand, and South Africa	9.0	7.7	6.6	7.8	7.0	7.1	7.4	9.4	10.9	11.0
Australia	5.1	4.4	3.9	4.8	5.1	5.1	5.3	6.8	8.1	8.3
Other countries, except Eastern Europe	90.7	80.1	70.4	74.6	72.0	71.0	82.4	109.1	121.9	128.7
OPEC [2]	21.1	20.7	15.3	13.8	11.4	10.4	10.7	13.8	13.1	12.6
Other [3]	69.6	59.5	55.2	60.8	60.6	60.6	71.7	95.3	108.9	116.1
Eastern Europe	4.4	3.7	3.0	4.3	3.3	2.1	2.3	3.8	5.6	4.8
International organizations and unallocated	.1	.1	.1	.0	.2	....	....	.1	.2	.8
Imports	265.1	247.6	268.9	332.4	338.1	368.4	409.8	447.3	475.3	491.1
Industrial countries	144.3	144.1	159.9	205.5	219.1	245.4	259.7	283.4	291.8	294.7
Canada	48.3	48.5	56.0	67.6	70.4	69.7	73.6	84.7	89.4	92.4
Japan	37.6	37.7	42.8	60.2	65.7	80.8	84.6	89.8	93.5	87.5
Western Europe	52.9	52.9	55.6	72.1	77.5	89.0	96.1	102.6	102.3	107.5
Australia, New Zealand, and South Africa	5.6	5.0	5.4	5.6	5.6	5.9	5.4	6.2	6.6	7.4
Australia	2.5	2.3	2.3	2.7	2.7	2.6	3.0	3.5	3.8	4.4
Other countries, except Eastern Europe	119.2	102.4	107.6	124.7	117.1	121.1	148.2	161.8	181.5	194.2
OPEC [2]	49.9	31.5	25.3	26.9	22.7	18.9	24.4	23.0	30.7	36.4
Other [3]	69.3	70.9	82.3	97.8	94.5	102.2	123.8	138.8	150.8	157.8
Eastern Europe	1.6	1.1	1.4	2.2	1.8	2.0	1.9	2.2	2.1	2.2
International organizations and unallocated	....	.0	.0	....	....	....	....	....	....	....
Balance (excess of exports +)	−28.0	−36.4	−67.1	−112.5	−122.1	−145.1	−159.5	−127.0	−114.9	−105.5
Industrial countries	−2.4	−16.9	−31.5	−64.5	−78.6	−95.0	−94.0	−76.0	−59.0	−43.5
Canada	−2.2	−9.3	−11.5	−14.6	−15.0	−13.2	−11.6	−10.4	−9.7	−8.4
Japan	−15.8	−17.0	−21.1	−37.0	−43.5	−54.4	−57.0	−52.6	−49.8	−40.5
Western Europe	12.2	6.8	−.2	−15.2	−21.4	−28.6	−27.5	−16.2	−3.8	1.7
Australia, New Zealand, and South Africa	3.4	2.6	1.2	2.2	1.4	1.1	2.0	3.2	4.2	3.6
Australia	2.6	2.1	1.6	2.1	2.4	2.5	2.3	3.3	4.3	3.9
Other countries, except Eastern Europe	−28.5	−22.3	−37.2	−50.1	−45.2	−50.1	−65.8	−52.7	−59.5	−65.5
OPEC [2]	−28.8	−10.9	−10.0	−13.1	−11.3	−8.5	−13.7	−9.3	−17.6	−23.8
Other [3]	.3	−11.4	−27.1	−37.0	−33.9	−41.6	−52.1	−43.4	−41.9	−41.7
Eastern Europe	2.9	2.7	1.6	2.1	1.4	.1	.3	1.7	3.5	2.7
International organizations and unallocated	.1	.0	.1	.0	.2	....	....	.1	.2	.8

[1] Preliminary; seasonally adjusted.

[2] Organization of Petroleum Exporting Countries, consisting of Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

[3] Latin American Republics, other Western Hemisphere, and other countries in Asia and Africa, less members of OPEC.

Note.—Data are on an international transactions basis and exclude military.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–105.—*U.S. merchandise exports, imports, and trade balance, 1970–90*

[Billions of dollars; monthly data seasonally adjusted]

Year or month	Merchandise exports (f.a.s. value)[1]							General merchandise imports (customs value)[3]							General merchandise imports (c.i.f. value)[4]	Trade balance	
	Total[2]	Principal end-use commodity category						Total	Principal end-use commodity category							Exports (f.a.s.) less imports (customs value)	Exports (f.a.s.) less imports (c.i.f.)
		Foods, feeds, and beverages	Industrial supplies and materials	Capital goods except automotive	Automotive vehicles, parts, and engines	Consumer goods (nonfood) except automotive	Other[2]		Foods, feeds, and beverages	Industrial supplies and materials	Capital goods except automotive	Automotive vehicles, parts, and engines	Consumer goods (nonfood) except automotive	Other			
	F.a.s. value[5]							Customs value									
1970	43.2							40.0							42.4	3.2	0.8
1971	44.1							45.6							48.3	−1.5	−4.3
1972	49.9							55.6							58.9	−5.7	−9.0
1973	71.9							69.5							73.2	2.4	−1.3
1974	99.4							103.3							110.9	−3.9	−11.4
								F.a.s. value[5]									
1974	99.4							102.6							110.9	−3.1	−11.4
1975	108.9							98.5							105.9	10.4	3.0
1976	116.8							123.5							132.5	−6.7	−15.7
1977	123.2							150.4							160.4	−27.2	−37.2
1978	145.8							174.8							186.0	−28.9	−40.2
1979	186.4							209.5							222.2	−23.1	−35.9
1980	225.6							244.9							257.0	−19.3	−31.4
								Customs value									
1981	238.7							261.0							273.4	−22.3	−34.6
1982	216.4	31.3	61.7	72.7	15.7	14.3	20.7	244.0	17.1	112.0	35.4	33.3	39.7	6.5	254.9	−27.5	−38.4
1983	205.6	30.9	56.7	67.2	16.8	13.4	20.5	258.0	18.2	107.0	40.9	40.8	44.9	6.3	269.9	−52.4	−64.2
1984	224.0	31.5	61.7	72.0	20.6	13.3	24.0	[6] 330.7	21.0	123.7	59.8	53.5	60.0	7.8	346.4	−106.7	−122.4
1985	[7] 218.8	24.0	58.5	73.9	22.9	12.6	27.3	[6] 336.5	21.9	113.9	65.1	66.8	68.3	9.4	352.5	−117.7	−133.6
1986	[7] 227.2	22.3	57.3	75.8	21.7	14.2	35.9	365.4	24.4	101.3	71.8	78.2	79.4	10.4	382.3	−138.3	−155.1
1987	254.1	24.3	66.7	86.2	24.6	17.7	34.6	406.2	24.8	111.0	84.5	85.2	88.7	12.1	424.4	−152.1	−170.3
1988	322.4	32.3	85.1	109.2	29.3	23.1	43.4	441.0	24.8	118.3	101.4	87.7	95.9	12.8	459.5	−118.5	−137.1
1989	363.8	37.2	99.3	138.8	34.8	36.4	17.2	473.2	25.1	132.3	113.3	86.1	102.9	13.6	493.2	−109.4	−129.4
1989:																	
Jan	28.3	3.1	7.8	10.5	2.9	2.7	1.3	37.4	2.2	10.7	8.5	7.3	7.8	.9	39.0	−9.1	−10.7
Feb	28.4	3.1	7.8	10.5	2.9	2.8	1.4	38.2	2.1	10.0	9.1	7.6	8.4	1.0	39.7	−9.8	−11.3
Mar	30.8	3.4	8.4	11.6	3.0	3.1	1.3	39.9	2.1	10.7	9.5	7.9	8.5	1.1	41.5	−9.0	−10.7
Apr	30.4	3.2	8.3	11.7	3.1	2.9	1.3	38.7	2.0	11.0	9.0	7.3	8.3	1.1	40.3	−8.3	−9.9
May	30.7	3.2	8.7	11.4	2.9	3.0	1.5	40.9	2.2	11.8	9.8	7.3	8.7	1.1	42.6	−10.3	−11.9
June	31.6	3.4	8.7	11.8	2.9	3.3	1.5	39.5	2.1	11.3	9.7	6.9	8.5	1.1	41.1	−8.0	−9.6
July	29.9	3.0	8.4	11.8	2.5	2.9	1.3	39.0	2.1	11.2	9.3	6.8	8.6	1.0	40.7	−9.1	−10.8
Aug	30.2	3.0	8.5	11.7	2.7	3.0	1.4	40.5	2.1	11.6	9.6	7.2	8.8	1.2	42.3	−10.3	−12.1
Sept	30.1	2.8	8.1	12.3	2.6	2.9	1.4	38.9	1.9	10.5	9.4	7.0	8.8	1.2	40.5	−8.8	−10.4
Oct	31.4	3.0	8.4	12.3	3.1	3.0	1.6	41.6	2.1	11.9	9.9	7.2	9.1	1.4	43.4	−10.2	−12.0
Nov	30.6	3.2	8.3	11.1	3.0	3.4	1.7	40.5	2.1	11.1	10.0	7.0	9.0	1.3	42.3	−9.9	−11.7
Dec	31.3	3.0	7.9	12.3	3.1	3.4	1.6	38.1	2.0	10.4	9.4	6.5	8.4	1.2	39.7	−6.8	−8.4
1990:																	
Jan	31.4	3.1	8.6	12.0	2.5	3.4	1.8	41.6	2.3	12.9	9.8	6.4	8.9	1.3	43.4	−10.2	−12.1
Feb	31.6	3.1	8.0	12.8	2.8	3.4	1.6	38.7	2.3	11.1	9.1	6.7	8.3	1.2	40.4	−7.1	−8.8
Mar	33.3	3.2	8.6	12.8	3.3	3.4	1.8	41.6	2.5	11.5	9.8	7.9	8.7	1.3	43.5	−8.4	−10.2
Apr	32.1	3.0	8.4	12.4	3.0	3.5	1.7	39.4	2.3	10.5	9.8	6.9	8.7	1.3	41.1	−7.3	−9.1
May	32.8	2.9	8.4	12.7	3.5	3.6	1.8	40.5	2.3	11.3	9.5	7.5	8.7	1.3	42.4	−7.8	−9.6
June	34.2	3.4	8.4	13.5	3.4	3.9	1.6	39.6	2.1	10.5	9.6	7.3	8.5	1.4	41.3	−5.3	−7.1
July	32.1	2.8	8.1	12.8	3.0	3.7	1.8	41.2	2.1	11.0	10.1	7.5	9.1	1.3	43.1	−9.1	−11.0
Aug	32.5	3.1	8.7	12.5	3.1	3.5	1.7	42.3	2.1	12.3	9.8	7.7	9.1	1.3	44.2	−9.7	−11.6
Sept	32.0	2.7	8.6	12.6	2.7	3.5	1.8	41.3	2.1	12.8	9.3	7.0	8.6	1.6	43.1	−9.3	−11.1
Oct	35.0	2.6	10.0	13.2	3.4	3.9	1.8	46.0	2.2	14.3	10.6	8.0	9.6	1.4	47.9	−11.0	−12.9
Nov	33.6	3.0	9.5	12.3	3.1	3.8	2.0	43.3	2.1	13.4	10.2	7.1	9.1	1.5	45.2	−9.7	−11.5

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[1] Department of Defense shipments of grant-aid military supplies and equipment under the Military Assistance Program are excluded from total exports through 1985 and included beginning 1986.

[2] Includes undocumented exports to Canada through 1988. Beginning 1989, undocumented exports to Canada are included in the appropriate end-use category.

[3] Total arrivals of imported goods other than intransit shipments.

[4] C.i.f. (cost, insurance, and freight) import value at first port of entry into United States. Data for 1967–73 are estimates.

[5] F.a.s. (free alongside ship) value basis at U.S. port of exportation for exports and at foreign port of exportation for imports.

[6] Total includes revisions not reflected in detail.

[7] Total exports are on a revised statistical month basis; end-use categories are on a statistical month basis.

Note.—Data are as reported by the Bureau of the Census adjusted to include silver ore and bullion reported separately prior to 1969. Trade in gold is included beginning 1974. Export statistics cover all merchandise shipped from the U.S. customs area, except supplies for the U.S. Armed Forces. Exports include shipments under Agency for International Development and Food for Peace programs as well as other private relief shipments.

Data beginning 1974 include trade of the U.S. Virgin Islands.

Source: Department of Commerce, Bureau of the Census.

TABLE B–106.—*International reserves, selected years, 1952–90*

[Millions of SDRs; end of period]

Area and country	1952	1962	1972	1982	1987	1988	1989	1990	
								Nov	Dec
All countries	49,388	62,851	147,323	361,452	539,809	574,739	622,004	653,952	....
Industrial countries [1]	39,280	53,502	113,362	214,014	352,489	381,104	409,991	437,232	....
United States	24,714	17,220	12,112	29,918	33,657	36,471	57,525	59,631	59,975
Canada	1,944	2,561	5,572	3,428	5,778	12,037	12,781	12,935	13,060
Australia	920	1,168	5,656	6,053	6,441	10,383	10,763	11,156	11,710
Japan	1,101	2,021	16,916	22,001	57,925	72,727	64,735	55,329	56,027
New Zealand	183	251	767	577	2,298	2,108	2,303	....	....
Austria	116	1,081	2,505	5,544	6,049	6,215	7,266	7,328	7,305
Belgium	1,133	1,753	3,564	4,757	7,958	8,113	9,250	....	....
Denmark	150	256	787	2,111	7,153	8,057	4,925	7,439	7,502
Finland	132	237	664	1,420	4,592	4,801	3,959	6,991	6,849
France	686	4,049	9,224	17,850	26,161	21,713	21,592	28,277	....
Germany	960	6,958	21,908	43,909	58,846	46,824	49,527	50,341	51,067
Greece	94	287	950	916	2,007	2,808	2,572	2,647	2,517
Iceland	8	32	78	133	221	218	258	278	307
Ireland	318	359	1,038	2,390	3,393	3,793	3,100	4,058	3,688
Italy	722	4,068	5,605	15,108	23,631	28,131	37,884	47,416	46,565
Netherlands	953	1,943	4,407	10,723	12,818	13,483	14,100	13,885	13,827
Norway	164	304	1,220	6,272	10,105	9,901	10,531	10,880	10,819
Portugal	603	680	2,129	1,179	3,047	4,372	8,135	11,053	....
Spain	134	1,045	4,618	7,450	22,035	28,041	32,104	36,268	36,555
Sweden	504	802	1,453	3,397	5,974	6,523	7,487	13,092	....
Switzerland	1,667	2,919	6,961	16,930	22,283	20,900	22,027	20,820	23,386
United Kingdom	1,956	3,308	5,201	11,904	30,070	33,438	27,121	25,716	25,864
Developing countries: Total [2]	9,648	9,349	33,961	147,438	187,320	193,635	212,013	216,719	....
By area:									
Africa	1,786	2,110	3,962	7,731	7,566	7,769	9,431	10,954	....
Asia [2]	3,793	2,772	8,129	44,476	99,720	112,162	121,690	123,222	....
Europe	269	381	3,345	5,571	6,904	8,706	13,163	16,987	....
Middle East	1,183	1,805	9,436	64,094	45,897	41,642	42,312	37,472	....
Western Hemisphere	2,616	2,282	9,089	25,566	27,233	23,356	25,417	28,085	....
Memo:									
Oil-exporting countries	1,699	2,030	9,956	67,163	49,146	42,993	44,363	•40,071	....
Non-oil developing countries [2]	7,949	7,319	24,005	80,275	138,174	150,642	167,649	176,649	....

[1] Includes data for Luxembourg.

[2] Includes data for Taiwan Province of China.

Note.—International reserves is comprised of monetary authorities' holdings of gold (at SDR 35 per ounce), special drawing rights (SDRs), reserve positions in the International Monetary Fund, and foreign exchange. Data exclude U.S.S.R., other Eastern European countries, and Cuba (after 1960).

U.S. dollars per SDR (end of period) are: 1952 and 1962—1.00000; 1972—1.08571; 1982—1.10311; 1987—1.41866; 1988—1.34570; 1989—1.31416; November 1990—1.4268; and December 1990—1.42266.

Source: International Monetary Fund, *International Financial Statistics.*

TABLE B–107.—*Industrial production and consumer prices, major industrial countries, 1962–90*

Year or quarter	United States	Canada	Japan	European Community [1]	France	West Germany	Italy	United Kingdom
	Industrial production (1987=100) [2]							
1962	41.6	36.3	20.0	48.2	46	49.8	41.1	60.0
1963	44.0	38.7	22.3	50.3	51	51.2	44.7	62.0
1964	47.0	42.2	25.9	53.9	55	55.7	46.4	67.0
1965	51.7	45.8	26.9	56.1	56	58.8	48.6	68.9
1966	56.3	49.1	30.3	58.3	59	59.4	54.3	70.0
1967	57.5	51.1	36.2	59.3	61	57.6	58.5	70.5
1968	60.7	54.3	41.7	63.7	62	62.9	61.9	75.9
1969	63.5	58.1	48.3	69.6	69	70.9	64.2	78.5
1970	61.4	58.8	55.0	73.1	72	75.5	68.3	78.9
1971	62.2	62.0	56.5	74.7	77	77.0	68.0	78.5
1972	68.3	66.7	59.6	78.0	81	79.9	70.8	79.9
1973	73.8	73.8	67.9	83.7	87	85.0	77.7	87.0
1974	72.7	76.1	66.4	84.3	90	84.8	81.2	85.4
1975	66.3	71.6	59.4	78.7	83	79.6	73.7	80.8
1976	72.4	76.0	66.0	84.5	90	86.8	82.9	83.4
1977	78.2	79.3	68.6	86.6	92	88.0	83.8	87.6
1978	82.6	82.1	73.0	95.4	94	90.4	85.4	90.1
1979	85.7	86.1	78.1	93.1	99	94.7	91.1	93.6
1980	84.1	83.1	81.7	92.8	99	95.0	96.2	87.4
1981	85.7	84.8	82.6	91.1	98	93.2	94.7	84.7
1982	81.9	76.5	82.9	89.9	97	90.3	91.7	86.3
1983	84.9	81.5	85.5	90.8	97	90.9	88.9	89.5
1984	92.8	91.4	93.4	92.8	97	93.5	91.8	89.6
1985	94.4	96.5	96.8	95.9	97	97.7	92.9	94.5
1986	95.3	95.7	96.6	98.1	98	99.6	96.2	96.8
1987	100.0	100.0	100.0	100.0	100	100.0	100.0	100.0
1988	105.4	105.0	109.3	104.4	105	103.9	105.9	103.6
1989	108.1	105.1	115.7	108.2	109	108.7	109.2	104.0
1990 [p]	109.1	......	......	......	......	......	......	......
1989: I	107.7	105.0	115.1	106.5	107.2	106.6	107.6	104.0
II	108.4	105.7	115.4	107.6	109.0	107.6	107.1	103.3
III	108.1	105.2	115.9	108.2	109.8	109.9	110.0	104.4
IV	108.1	104.4	116.5	109.5	109.8	110.5	112.3	104.2
1990: I	108.3	102.5	117.5	109.4	109.2	112.0	109.7	104.2
II	109.4	102.6	120.0	109.3	109.8	112.4	108.4	106.1
III	110.5	102.2	123.1	......	......	116.3	110.2	103.0
IV [p]	108.2	......	......	......	......	......	......	......
	Consumer prices (1982–84=100)							
1962	30.2	27.4	24.7	19.6	21.0	43.1	12.6	15.8
1963	30.6	27.9	26.6	20.3	22.0	44.3	13.6	16.1
1964	31.0	28.4	27.7	21.0	22.7	45.4	14.4	16.6
1965	31.5	29.1	29.5	21.8	23.3	46.9	15.0	17.4
1966	32.4	30.2	31.1	22.6	23.9	48.5	15.4	18.1
1967	33.4	31.3	32.2	23.2	24.6	49.3	16.0	18.5
1968	34.8	32.5	34.0	24.0	25.7	50.1	16.2	19.4
1969	36.7	34.0	35.8	25.0	27.4	51.0	16.6	20.4
1970	38.8	35.1	38.5	26.3	28.7	52.9	16.8	21.8
1971	40.5	36.1	40.9	28.0	30.3	55.6	17.6	23.8
1972	41.8	37.9	42.9	29.8	32.2	58.7	18.7	25.5
1973	44.4	40.7	47.9	32.4	34.5	62.8	20.6	27.9
1974	49.3	45.2	59.0	37.0	39.3	67.2	24.6	32.3
1975	53.8	50.1	66.0	42.4	43.9	71.2	28.8	40.2
1976	56.9	53.8	72.1	47.6	48.1	74.2	33.6	46.8
1977	60.6	58.1	78.0	53.5	52.7	76.9	40.1	54.2
1978	65.2	63.3	81.3	58.6	57.5	79.0	45.1	58.7
1979	72.6	69.1	84.3	65.0	63.6	82.3	52.1	66.6
1980	82.4	76.1	90.9	74.0	72.2	86.8	63.2	78.5
1981	90.9	85.6	95.4	83.1	81.8	92.2	75.4	87.9
1982	96.5	94.9	98.0	92.2	91.7	97.0	87.7	95.4
1983	99.6	100.4	99.9	100.2	100.3	100.3	100.8	99.8
1984	103.9	104.8	102.1	107.5	108.0	102.7	111.5	104.8
1985	107.6	108.9	104.2	114.2	114.3	104.8	121.1	111.1
1986	109.6	113.4	104.9	118.5	117.2	104.7	128.5	114.9
1987	113.6	118.4	105.0	122.5	121.1	104.9	134.4	119.7
1988	118.3	123.2	105.7	126.9	124.4	106.3	141.1	125.6
1989	124.0	129.3	108.1	133.8	128.9	109.2	150.4	135.4
1990	130.7	135.5	......	......	......	112.1	159.6	148.2
1989: I	121.9	126.5	105.9	131.1	126.8	108.2	147.1	130.9
II	123.7	128.7	108.4	133.2	128.4	109.3	149.6	135.0
III	124.6	130.5	108.6	134.4	129.3	109.3	151.1	136.3
IV	125.8	131.5	109.3	136.2	130.3	110.0	153.7	139.0
1990: I	128.3	133.3	109.6	138.0	131.2	111.2	156.3	141.4
II	129.5	134.6	111.1	140.5	132.3	111.8	158.1	148.0
III	131.5	136.0	111.6	142.4	133.7	112.3	160.3	150.5
IV	133.7	137.9	......	......	......	113.3	163.5	152.8

[1] Consists of Belgium-Luxembourg, Denmark, France, Greece, Ireland, Italy, Netherlands, United Kingdom, West Germany, Portugal, and Spain. Industrial production prior to July 1981 excludes data for Greece, which joined the EC in 1981. Data for Portugal and Spain, which became members on January 1, 1986 are excluded prior to 1982.

[2] All data exclude construction. Quarterly data are seasonally adjusted.

Sources: Department of Commerce (International Trade Administration, Trade Information and Analysis, Office of Finance, Industry, and Trade Information) and Department of Labor (Bureau of Labor Statistics).

TABLE B–108.—*Civilian unemployment rate, and hourly compensation, major industrial countries, 1962–90*

[Quarterly data seasonally adjusted]

Year or quarter	United States	Canada	Japan	France	West Germany	Italy	United Kingdom
	Civilian unemployment rate (percent)[1]						
1962	5.5	5.5	1.3	1.4	0.6	2.8	2.7
1963	5.7	5.2	1.3	1.6	.5	2.4	3.3
1964	5.2	4.4	1.2	1.2	.4	2.7	2.5
1965	4.5	3.6	1.2	1.6	.3	3.5	2.1
1966	3.8	3.4	1.4	1.6	.3	3.7	2.3
1967	3.8	3.8	1.3	2.1	1.3	3.4	3.3
1968	3.6	4.5	1.2	2.7	1.1	3.5	3.2
1969	3.5	4.4	1.1	2.3	.6	3.5	3.1
1970	4.9	5.7	1.2	2.5	.5	3.2	3.1
1971	5.9	6.2	1.3	2.8	.6	3.3	3.9
1972	5.6	6.2	1.4	2.9	.7	3.8	4.2
1973	4.9	5.5	1.3	2.8	.7	3.7	3.2
1974	5.6	5.3	1.4	2.9	1.6	3.1	3.1
1975	8.5	6.9	1.9	4.1	3.4	3.4	4.6
1976	7.7	7.1	2.0	4.5	3.4	3.9	5.9
1977	7.1	8.1	2.0	5.1	3.4	4.1	6.4
1978	6.1	8.3	2.3	5.3	3.3	4.1	6.3
1979	5.8	7.4	2.1	6.0	2.9	4.4	5.4
1980	7.1	7.5	2.0	6.4	2.8	4.4	7.0
1981	7.6	7.5	2.2	7.6	4.0	4.9	10.5
1982	9.7	11.0	2.4	8.3	5.6	5.4	11.3
1983	9.6	11.8	2.7	8.5	[2] 6.9	5.9	11.8
1984	7.5	11.2	2.8	10.0	7.1	5.9	11.8
1985	7.2	10.5	2.6	10.4	7.2	6.0	11.2
1986	7.0	9.5	2.8	10.6	6.6	[2] 7.5	11.2
1987	6.2	8.8	2.9	10.7	6.3	7.9	10.3
1988	5.5	7.8	2.5	10.2	6.3	7.9	8.6
1989	5.3	7.5	2.3	9.6	5.7	7.8	7.0
1990	5.5	8.1	....	9.4	5.2	7.0	6.4
1989: I	5.2	7.5	2.4	9.7	5.9	7.8	7.6
II	5.3	7.6	2.3	9.6	5.7	8.0	7.2
III	5.3	7.4	2.3	9.6	5.7	7.8	6.7
IV	5.3	7.6	2.2	9.5	5.6	7.6	6.4
1990: I	5.3	7.6	2.1	9.4	5.4	7.4	6.3
II	5.3	7.4	2.1	9.4	5.3	6.8	6.2
III	5.6	8.2	2.1	9.4	5.2	6.9	6.4
IV	5.9	9.1	....	9.5	4.8	6.9	6.8
	Manufacturing hourly compensation in U.S. dollars (1982=100)[3]						
1962	23.9	20.1	6.0	12.1	10.6	11.2	13.0
1963	24.6	20.7	6.7	13.2	11.3	13.2	13.6
1964	25.6	21.6	7.5	14.3	12.3	14.1	14.4
1965	26.2	22.8	8.4	15.5	13.5	15.1	15.8
1966	27.4	24.7	9.3	16.4	14.6	16.0	17.1
1967	28.9	26.1	10.4	17.6	15.4	17.7	17.3
1968	31.0	28.2	12.2	19.8	16.6	18.9	16.2
1969	33.4	30.4	14.5	20.1	18.5	20.6	17.6
1970	35.8	33.9	17.2	21.2	23.4	25.1	20.4
1971	37.9	37.7	20.6	24.0	27.4	29.4	24.0
1972	39.8	41.3	27.1	28.9	33.0	34.9	28.4
1973	42.9	44.3	37.1	37.8	44.9	41.2	31.7
1974	47.7	52.2	45.2	41.4	52.3	48.1	36.3
1975	53.4	57.3	51.7	57.3	61.1	60.5	45.9
1976	57.9	67.7	55.8	59.3	64.4	59.0	43.1
1977	62.9	69.5	68.1	65.6	76.1	65.7	47.1
1978	68.2	69.8	93.3	81.0	95.1	78.8	60.5
1979	74.8	74.8	94.8	97.3	111.1	97.4	79.7
1980	83.7	83.0	97.5	113.5	120.9	111.1	106.1
1981	91.8	93.1	107.3	102.0	103.6	100.9	105.9
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	102.6	106.2	108.0	95.3	99.3	104.3	92.7
1984	105.9	105.9	111.3	90.4	93.0	103.5	87.4
1985	111.1	105.6	115.8	95.4	95.0	107.0	91.0
1986	116.2	107.8	172.1	129.1	133.9	142.7	110.9
1987	118.9	117.6	205.0	156.1	168.7	174.0	131.8
1988	122.9	132.9	236.4	164.1	179.8	182.5	152.0
1989	127.7	149.9	234.4	160.4	175.6	191.8	154.0
1990	131.9	....	....	....	....	....	....

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[1] Civilian unemployment rates, approximating U.S. concepts. Quarterly data for France, West Germany, and United Kingdom should be viewed as less precise indicators of unemployment under U.S. concepts than the annual data. Many Italians reported as unemployed did not actively seek work in the past 30 days, and they have been excluded for comparability with U.S. concepts. Inclusion of such persons would about double the unemployment rate for Italy through 1985, and increase it to 11–12 percent for 1986–90.

[2] There are breaks in the series for West Germany (1983) and Italy (1986). Based on the prior series, the rates for West Germany were 7.4 percent in 1983 and the rate for Italy was 6.3 percent in 1986.

[3] Hourly compensation in manufacturing, U.S. dollar basis. Data relate to all employed persons (wage and salary earners and the self-employed) in the United States and Canada, and to all employees (wage and salary earners) in the other countries. For France and United Kingdom, compensation adjusted to include changes in employment taxes that are not compensation to employees, but are labor costs to employers.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–109.—*Foreign exchange rates, 1967–90*

[Currency units per U.S. dollar, except as noted]

Period	Belgium (franc)	Canada (dollar)	France (franc)	Germany (mark)	Italy (lira)	Japan (yen)
March 1973	39.408	0.9967	4.5156	2.8132	568.17	261.90
1967	49.689	1.0789	4.9206	3.9865	624.09	362.13
1968	49.936	1.0776	4.9529	3.9920	623.38	360.55
1969	50.142	1.0769	5.1999	3.9251	627.32	358.36
1970	49.656	1.0444	5.5288	3.6465	627.12	358.16
1971	48.598	1.0099	5.5100	3.4830	618.34	347.79
1972	44.020	.9907	5.0444	3.1886	583.70	303.13
1973	38.955	1.0002	4.4535	2.6715	582.41	271.31
1974	38.959	.9780	4.8107	2.5868	650.81	291.84
1975	36.800	1.0175	4.2877	2.4614	653.10	296.78
1976	38.609	.9863	4.7825	2.5185	833.58	296.45
1977	35.849	1.0633	4.9161	2.3236	882.78	268.62
1978	31.495	1.1405	4.5091	2.0097	849.13	210.39
1979	29.342	1.1713	4.2567	1.8343	831.11	219.02
1980	29.238	1.1693	4.2251	1.8175	856.21	226.63
1981	37.195	1.1990	5.4397	2.2632	1138.58	220.63
1982	45.781	1.2344	6.5794	2.4281	1354.00	249.06
1983	51.123	1.2325	7.6204	2.5539	1519.32	237.55
1984	57.752	1.2952	8.7356	2.8455	1756.11	237.46
1985	59.337	1.3659	8.9800	2.9420	1908.88	238.47
1986	44.664	1.3896	6.9257	2.1705	1491.16	168.35
1987	37.358	1.3259	6.0122	1.7981	1297.03	144.60
1988	36.785	1.2306	5.9595	1.7570	1302.39	128.17
1989	39.409	1.1842	6.3802	1.8808	1372.28	138.07
1990	33.424	1.1668	5.4467	1.6166	1198.27	145.00
1989: I	38.807	1.1922	6.2971	1.8524	1358.39	128.66
II	40.468	1.1934	6.5459	1.9335	1408.45	138.15
III	40.240	1.1823	6.5018	1.9226	1385.22	142.29
IV	38.072	1.1688	6.1688	1.8125	1335.69	143.13
1990: I	35.294	1.1823	5.7358	1.6916	1254.81	148.15
II	34.594	1.1707	5.6406	1.6773	1231.81	155.38
III	32.759	1.1530	5.3396	1.5926	1176.03	145.27
IV	31.023	1.1612	5.0661	1.5033	1129.71	130.86

Period	Netherlands (guilder)	Sweden (krona)	Switzerland (franc)	United Kingdom (pound) [1]	Multilateral trade-weighted value of the U.S. dollar (March 1973=100)	
					Nominal	Real [2]
March 1973	2.8714	4.4294	3.2171	247.24	100.0	100.0
1967	3.6024	5.1621	4.3283	275.04	120.0	....
1968	3.6198	5.1683	4.3163	239.35	122.1	....
1969	3.6240	5.1701	4.3131	239.01	122.4	....
1970	3.6166	5.1862	4.3106	239.59	121.1	....
1971	3.4953	5.1051	4.1171	244.42	117.8	....
1972	3.2098	4.7571	3.8186	250.34	109.1	....
1973	2.7946	4.3619	3.1688	245.25	99.1	98.8
1974	2.6879	4.4387	2.9805	234.03	101.4	99.2
1975	2.5293	4.1531	2.5839	222.17	98.5	93.9
1976	2.6449	4.3580	2.5002	180.48	105.7	97.2
1977	2.4548	4.4802	2.4065	174.49	103.4	93.0
1978	2.1643	4.5207	1.7907	191.84	92.4	84.2
1979	2.0073	4.2893	1.6644	212.24	88.1	83.1
1980	1.9875	4.2310	1.6772	232.46	87.4	84.8
1981	2.4999	5.0660	1.9675	202.43	103.4	100.9
1982	2.6719	6.2839	2.0327	174.80	116.6	111.7
1983	2.8544	7.6718	2.1007	151.59	125.3	117.1
1984	3.2085	8.2708	2.3500	133.68	138.2	128.5
1985	3.3185	8.6032	2.4552	129.74	143.0	131.9
1986	2.4485	7.1273	1.7979	146.77	112.2	103.3
1987	2.0264	6.3469	1.4918	163.98	96.9	90.6
1988	1.9778	6.1370	1.4643	178.13	92.7	88.0
1989	2.1219	6.4559	1.6369	163.82	98.6	94.2
1990	1.8215	5.9231	1.3901	178.41	89.1	86.4
1989: I	2.0910	6.3330	1.5838	174.51	96.0	91.6
II	2.1797	6.5494	1.6964	162.59	100.5	96.0
III	2.1681	6.5415	1.6585	159.75	100.5	96.2
IV	2.0461	6.3952	1.6065	158.53	97.3	93.1
1990: I	1.9064	6.1582	1.5070	165.55	93.2	89.8
II	1.8875	6.0867	1.4435	167.50	92.6	89.0
III	1.7947	5.8299	1.3356	186.42	87.5	84.6
IV	1.6955	5.6136	1.2736	194.39	83.0	80.5

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[1] Cents per unit of foreign currency.

[2] Adjusted by changes in consumer prices.

Source: Board of Governors of the Federal Reserve System.

TABLE B–110.—*Growth rates in real gross national product, 1961–90*

[Percent change]

Area and country	1961–65 annual average	1966–70 annual average	1971–75 annual average	1976–83 annual average	1984	1985	1986	1987	1988	1989	1990[1]
OECD countries[2]	5.3	4.6	3.0	2.8	4.8	3.4	2.7	3.4	4.4	3.4	2.8
United States	4.6	3.0	2.2	2.5	6.8	3.4	2.7	3.4	4.5	2.5	.9
Canada	5.3	4.6	5.2	2.7	6.3	4.7	3.3	4.0	4.4	3.0	1.1
Japan	12.4	11.0	4.3	4.4	5.1	4.9	2.5	4.6	5.7	4.9	6.1
European Community[3]	4.9	4.6	2.9	2.3	2.5	2.4	2.7	2.7	3.9	3.5	2.9
France	5.9	5.4	4.0	2.5	1.3	1.9	2.5	2.2	3.8	3.6	2.5
West Germany	4.7	4.2	2.1	2.4	3.3	1.9	2.3	1.6	3.7	3.9	4.2
Italy	4.8	6.6	2.4	3.3	3.0	2.6	2.5	3.0	4.2	3.2	2.6
United Kingdom	3.2	2.5	2.1	1.7	2.1	3.6	3.9	4.7	4.6	2.2	1.6
U.S.S.R.	4.8	5.0	3.0	2.0	1.2	.9	3.5	1.9	2.2	1.4	−3.0
Eastern Europe	3.9	3.8	4.9	1.2	3.0	.5	2.5	.0	1.5	−.3	−4.0
China	−.2	8.3	7.4	6.7	14.6	12.7	8.3	11.0	10.8	3.9	4.4

[1] Estimates.

[2] OECD (Organization for Economic Cooperation and Development) includes Australia, Austria, Belgium, Denmark, Finland, France, West Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and United Kingdom, not shown separately.

[3] Includes Belgium, Denmark, Greece, Ireland, Luxembourg, Netherlands, Portugal, and Spain, not shown separately.

Sources: Department of Commerce, International Monetary Fund, Organization for Economic Cooperation and Development, and Council of Economic Advisers.

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